Trawl Survey of Juvenile Flatfish in Hecate Strait by the *M/V Double Decker*, April 12-29, 1983

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TRAWL SURVEY OF JUVENILE FLATFISH IN HECATE STRAIT BY THE M/V DOUBLE DECKER, APRIL 12-29, 1983

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ABSTRACT

Fargo, J., J. Cooper, G. C. Hope, and S. J. Westrheim. 1983. Trawl survey of juvenile flatfish in Hecate Strait, April 12-29, 1983. Can. Data Rep. Fish. Aquat. Sci. 404: 77 p.

The Pacific Biological Station conducts an annual trawl survey of Hecate Strait to assess the relative abundance of juvenile rock sole and English sole in regard to predicting species' recruitment to commercial fisheries in Hecate Strait. This report summarizes information from the April 1983 survey, including sampling stations, catch rates of juvenile rock sole and English sole, biological data collected and oceanographic (XBT) temperature profiles. Ocean temperatures were found to be well above the normal long-term average and flatfish target species were found in higher densities at deeper depths than in previous years.

RÉSUMÉ

Fargo, J., J. Cooper, G. C. Hope, and S. J. Westrheim. 1983. Trawl survey of juvenile flatfish in Hecate Strait, April 12-29, 1983. Can. Data Rep. Fish. Aquat. Sci. 404: 77 p.

Chaque année, la Station de biologie du Pacifique mène un levé au chalut dans le détroit d'Hécate, dans le but d'évaluer l'abondance de la sole anglaise et de la sole du Pacifique juvéniles en vue de prévoir le recrutement des espèces pour les pêches commerciales effectuées dans cette région. Le présent rapport résume l'information recueillie au cours du levé d'avril 1983, y compris les stations d'échantillonnage, les taux de prise de sole du Pacifique et de sole anglaise juvéniles, les données biologiques recueillies et les profils de températures océaniques (XBT). Ces dernières étaient sensiblement supérieures à la moyenne normale à long terme. La densité des espèces de poissons plats visées était supérieure à de plus grandes profondeurs que les années précédentes.

INTRODUCTION

In August 1980, annual trawl surveys were initiated to estimate the abundance of juvenile English sole and rock sole in Hecate Strait (Stocker et al. 1981) (Fig. 1). Subsequently, surveys were completed in August 1981 (Fargo, Hoyt et al. 1982) and April 1982 (Fargo, Harling et al. 1982). The change from August to April was made to avoid the seasonal concentrations of spiny dogfish in areas occupied by juvenile flatfish.

The purpose of the survey is to provide abundance indices for a series of consecutive years which can be used to estimate mortality rates for juvenile English and rock soles, and predict the customarily variable recruitment to the important commercial fisheries in Hecate Strait. Accurate estimates of recruitment will be useful to the managers of these resources.

This report provides the detailed results of the 1983 trawl survey, conducted during April 12-29, 1983.

MATERIALS AND METHODS

The M/V DOUBLE DECKER, a 20 m (65 ft) fiberglass stern trawler was chartered for the survey.

Trawling gear was basically the same as for previous surveys (Fig. 3). A 21.3 m (70 ft) Gulf semi-balloon shrimp trawl was fished. The sweep lines were increased in length from 27.4 m (15 fa) to 36.5 m (20 fa) to improve the effectiveness of the fishing gear with regard to flatfish by increasing the herding effect of the sweeplines in front of the net (Harden Jones et al. 1977). The 2.7 X 1.4 m (9 X 4.5 ft) rectangular wooden doors used belonged to the vessel.

Haul durations were kept short (approximately 30 min) so that the entire catch could be weighed and sampled. A specially designed 1.8 X 1.8 m (6 X 6 ft) wooden sorting table supported by 1 m (3 ft)long stout legs expedited catch sorting and decreased overall sampling time. Cod end lifts were weighed by means of an electronic load cell. Catches less than 1,300 kg were dumped directly onto the sorting table and sorted by species group for weighing. Catches in excess of 1,300 kg were dumped on the sorting table in lots of 1,300 kg or less. Sampling was also conducted on the sorting table.

All specimens were measured fork length to the nearest centimeter. To expedite collection of ageing structures (otoliths and/or interopercular bones), heads were collected

from small English sole and rock sole (≤ 30 cm) for later processing ashore. Lengths were recorded separately for all "head-sample" specimens. The head samples were packed in plastic bags, labelled (species, sex, haul number, and date), and stored in a freezer or in the vessel's chilled-seawater tanks (-2.2°C). Once ashore, all samples were stored in the Station's freezer for future processing.

RESULTS

A total of 63 hauls were made during the survey (Fig. 1). Bridge log information and catch data is contained in Appendix Table 1. A list of scientific and common names of species caught is contained in Appendix Table 2. Principal fish species caught during the survey included:

Species	Weight (kg)	% of total catch
Pacific cod	7,761	42.4
Skate	2,653	14.5
Rock sole	1,949	10.7
English sole	1,644	9.0
Butter sole	675	3.7
Walleye pollock	642	3.5
Pacific sanddab	504	2.8
Ratfish	480	2.6
Halibut[a] (65 fish)	421	2.3
Others[b]	1,562	8.5
Total	18,291	100.0

[a] Halibut caught were measured for fork length and released.
[b] Individual totals for other species were <1.7% of the total catch.

SIZE COMPOSITION

A list of biological samples collected during the cruise is contained in Table 1. Fork length measurements were collected from 10,514 specimens, comprising eight species.

Rock sole length measurements totalled 4,791, of which 4,538 were sexed. Total size composition is shown in Fig. 3, and by haul in Appendix Table 3. Heads for ageing were taken from 768 rock sole.

English sole length measurements totalled 4,128, of which 3,292 were sexed. Total size composition is shown in Fig. 4 and by haul in Appendix Table 4. Heads for ageing were taken from 523 English sole.

Length frequency data collected for other species listed in Table 1 are compiled by haul in Appendix Tables 5-10.

CATCH RATES

Over the depth range of 10-60 fath, catch rates (n/h) of small (<30 cm) specimens, varied among the two target species (Table 2). For English sole, catch rates peaked at 50-59 fath (2,524/h). Rock sole catch rates peaked at 30-39 fath (830/hr). Only comparable catch data (same general time of day, state of tide) were used in calculating catch rates.

WATER TEMPERATURES

Seven XBT casts were completed--three in Queen Charlotte Sound and four in Hecate Strait (Fig. 2; Appendix Table 11). Water temperatures were substantially warmer in April 1983 than during April 1982. In 1982, surface temperatures were 6.9-8.1°C and the water columns were isothermal to at least 72 fath (131 m) (Fargo et al. 1982). In 1983, surface temperatures were 8.4-10.7°C. At 50 fath (91 m), temperatures were 9.2-9.3°C in Queen Charlotte Sound and 7.9-8.7°C in Hecate Strait. At 100 fath (183 m), temperatures were approximately 6.8-7.2°C in Queen Charlotte Sound and Hecate Strait.

ACKNOWLEDGEMENTS

Thanks are extended to Captain Winston Decker and crewmen Ray Drake and Risk Benham. Their cooperation and enthusiasm aboard the vessel is greatly appreciated.

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Table 1. Inventory of biological data M/V DOUBLE DECKER, April 12-29, 1983.

	App. Table[a]	Length	Len/sex	Len/sex/ age	Total
Rock sole	3	253	3770	768	4,791
English sole	4	736	2869	523	4,128
Pacific cod	5	86	414	-	500
Butter sole	6	-	445	-	445
Walleye pollock	7	301	-	-	301
Pacific sanddab	8	-	173	-	173
Sand sole	9	-	163	-	163
Dover sole	10	-	13	-	13
Total		1,376	7,847	1,291	10,514

[a] Source of length-frequencies by haul.

Table 2. Target species catch rates by 10-fath (18-m) depth interval.

Depth interval (fath)	Species	Mean catch rate (kg/h)	No. of hauls	Mean catch rate (no/h)[a]	No. of hauls
10-19	English sole	2.4	15	14.8	15
	Rock sole	95.6	15	30.4	15
20-29	English sole	43.0	18	61.1	18
	rock sole	83.6	18	169.4	17
30-39	English sole	9.0	10	152.4	9
	Rock sole	133.2	10	830.0	10
40-49	English sole	137.2	9	751.5	8
	Rock sole	26.8	9	162.8	9
50-59	English sole	326.3	5	2524.6	5
	Rock sole	6.6	5	26.6	5

[a] No. $\leq$ 30 cm.

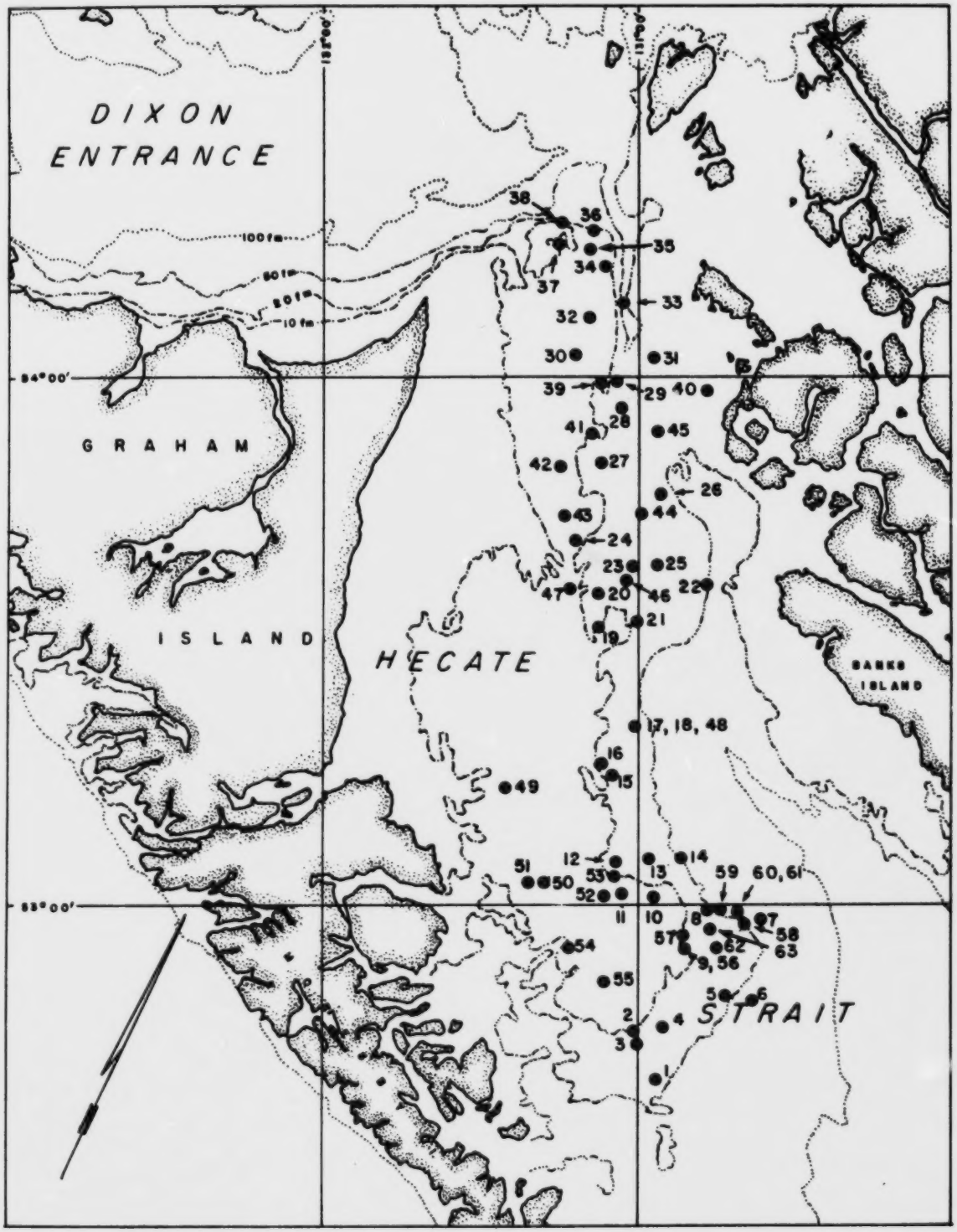

Fig. 1. Haul locations, M/V DOUBLE DECKER flatfish survey, April 12-29, 1983.

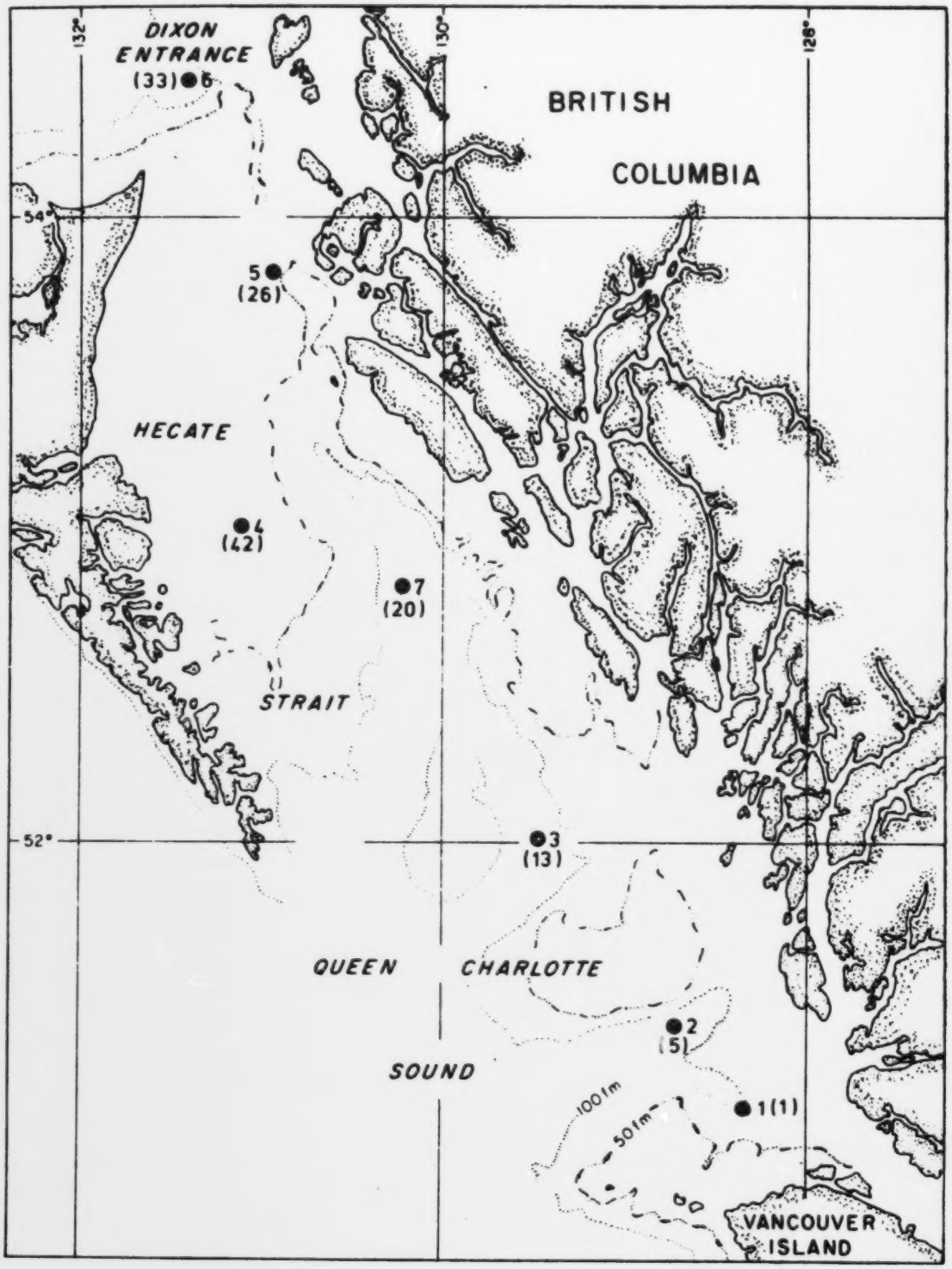

Fig. 2. Oceanographic Stations (XBT) occupied by M/V DOUBLE DECKER, April 12-29, 1983. Numbers in brackets are station numbers.

NET DIMENSIONS AND CHARACTERISTICS FOR BOTTOM TRAWL

VESSEL M/V DOUBLE DECKER NET 70 ft Gulf semi-balloon shrimp trawl.

OBSERVATION PERIOD April 12-29, 1983

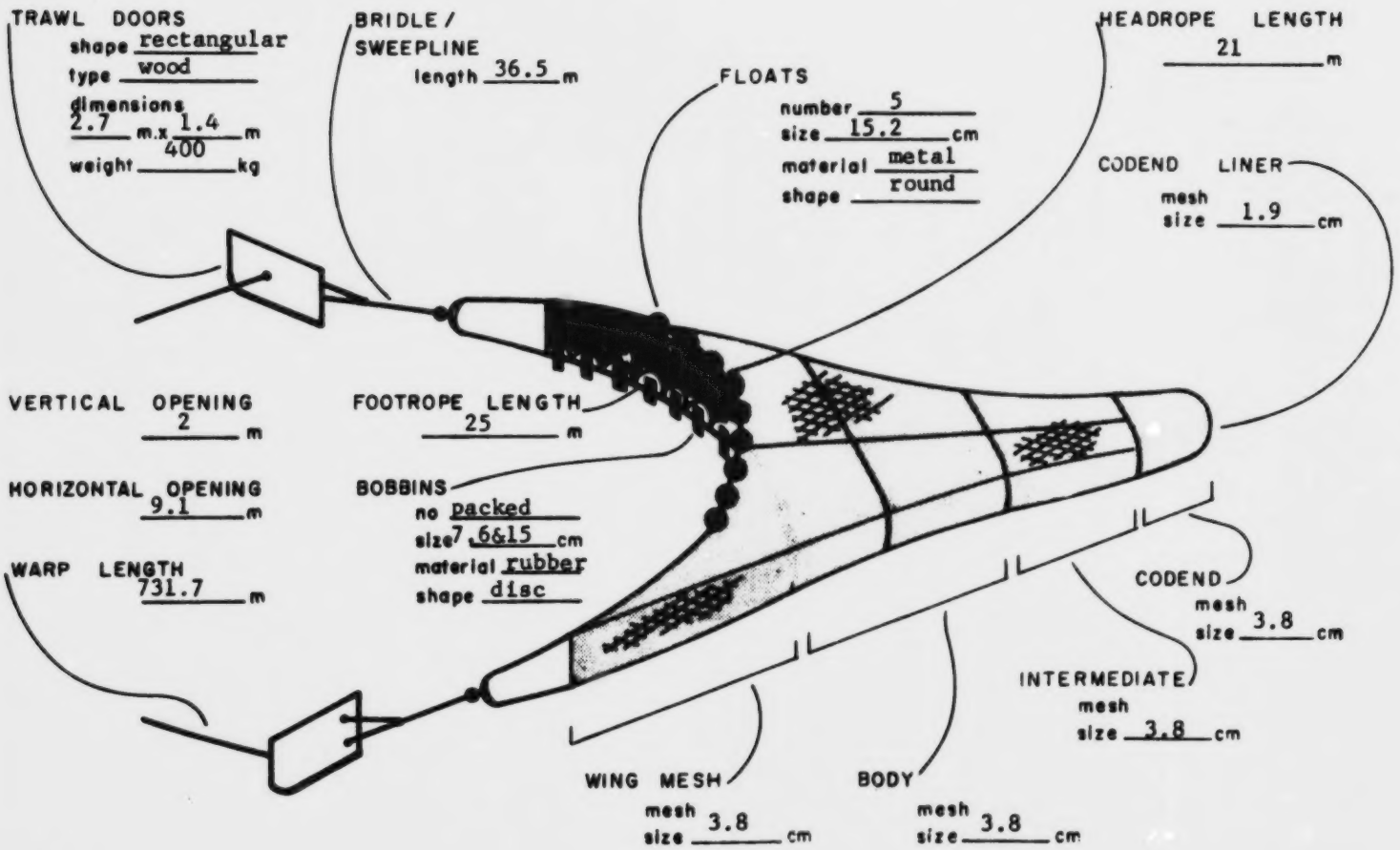

Fig. 3.

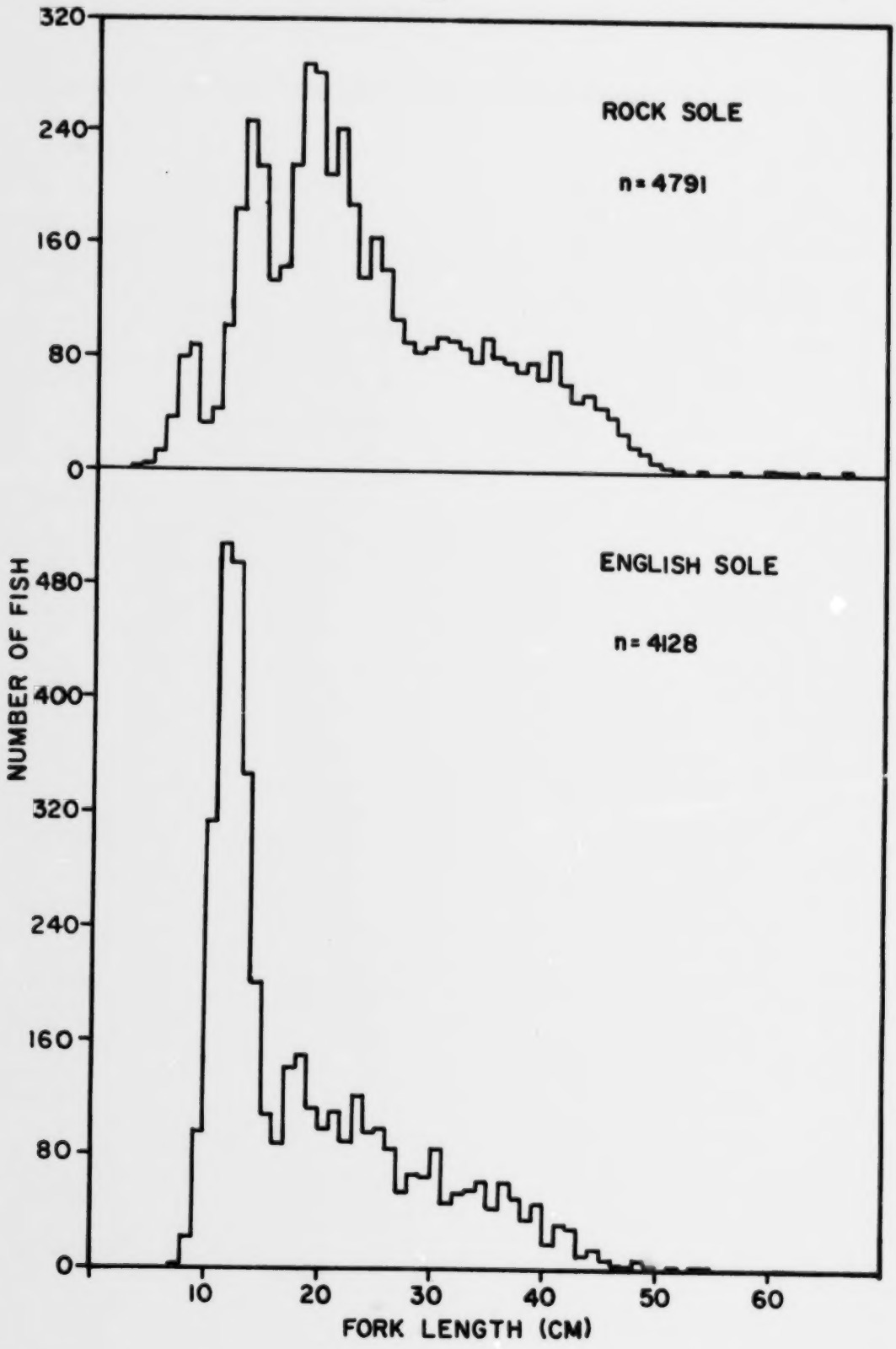

Fig. 4. Length frequency summaries (all samples combined) M/V DOUBLE DECKER flatfish survey, April 12-29, 1983.

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	1	2
MAJOR AREA	5C	5C
MINOR AREA	2B EAST	2B EAST
DATE	APR 14	APR 14
DEPTH MODE F/(M)	40 /(73)	23 /(42)
DURATION (H)	0.53	0.33

	START	STOP	START	STOP
TIME	14:53	15:25	16:30	16:50
LAT.(DEG,MIN)	52 40.3	52 42.5	52 45.8	52 45.1
LONG.(DEG,MIN)	130 58.8	130 55.7	131 00.4	130 59.3
LC-5990-X	12389.7	12391.7	12352.7	12360.1
LC-5990-Z	41428.3	41433.6	41443.5	41439.5
DEPTH (F)	39	40	23	23

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	-
FLATHEAD SOLE	-	-
HALIBUT	10	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	-	-
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	16	-
S. PINNIGER	16	-
S. PRORIGER	-	-
S. RUBERRIMUS	16	-
S. WILSONI	80	-
S. ZACENTRUS	32	-
HERRING	TRACE	-
LINGCOD	-	-
PACIFIC COD	-	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	TRACE	-
DOGFISH	-	-
RATFISH	-	-
SKATES	-	-
INVERTEBRATES	12	-
TOTAL CATCH (KG.)	182	0
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	3		4	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 14		APR 14	
DEPTH MODE F/(M)	22 /(40)		34 /(62)	
DURATION (H)	0.53		0.53	
	START	STOP	START	STOP
TIME	17:28	18:00	19:03	19:35
LAT.(DEG,MIN)	52 44.9	52 48.8	52 46.2	52 48.2
LONG.(DEG,MIN)	131 00.4	131 00.5	130 55.6	130 50.9
LC-5990-X	12359.2	12351.5	12365.4	12372.7
LC-5990-Z	41438.5	41441.7	41447.6	41459.1
DEPTH (F)	22	21	35	32

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	-
FLATHEAD SOLE	-	-
HALIBUT	-	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	-	-
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	-	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	-	-
RATFISH	-	-
SKATES	-	-
INVERTEBRATES	-	-
TOTAL CATCH (KG.)	0	0
REMARKS	USABLE	NET TORN

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	5		6	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 15		APR 15	
DEPTH MODE F/(M)	41 /(74)		56 /(102)	
DURATION (H)	0.50		0.43	
	START	STOP	START	STOP
TIME	6:29	6:59	7:59	8:25
LAT.(DEG,MIN)	52 57.2	52 57.4	52 47.6	52 47.3
LONG.(DEG,MIN)	130 48.1	130 47.3	130 40.8	130 40.6
LC-5990-X	12389.9	12388.2	12419.2	12420.3
LC-5990-Z	41458.1	41460.1	41468.1	41467.1
DEPTH (F)	41	41	56	56

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	TRACE	-
DAB (PACIFIC)	TRACE	100
DAB (SPECKLED)	-	-
DOVER SOLE	TRACE	2
ENGLISH SOLE	35	2
FLATHEAD SOLE	-	-
HALIBUT	-	-
PETRALE SOLE	-	-
REX SOLE	-	2
ROCK SOLE	27	-
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	1
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	1
PACIFIC COD	-	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	5	-
DOGFISH	TRACE	-
RATFISH	-	-
SKATES	-	-
INVERTEBRATES	133	1
TOTAL CATCH (KG.)	200	109
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	7		8	
MAJOR AREA	5C		5C	
MINOR AREA	5 LOWER		2B EAST	
DATE	APR 15		APR 15	
DEPTH MODE F/(M)	39 /(71)		35 /(64)	
DURATION (H)	0.47		0.50	
	START	STOP	START	STOP
TIME	10:20	10:48	11:18	11:48
LAT.(DEG,MIN)	52 58.1	52 58.2	52 58.1	52 57.2
LONG.(DEG,MIN)	130 39.5	130 41.1	130 42.2	130 42.1
LC-5990-X	12352.4	12343.9	12340.1	12347.5
LC-5990-Z	41508.1	41506.1	41506.1	41503.1
DEPTH (F)	39	39	35	34

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	TRACE	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	1	TRACE
FLATHEAD SOLE	-	-
HALIBUT	-	2
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	6	12
SAND SOLE	-	TRACE
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	TRACE	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	TRACE	-
LINGCOD	-	-
PACIFIC COD	1	22
PACIFIC TOMCOD	-	-
SANDLANCE	TRACE	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	2	-
DOGFISH	-	-
RATFISH	-	-
SKATES	-	240
INVERTEBRATES	75	-
TOTAL CATCH (KG.)	85	276
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	9		10	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 15		APR 15	
DEPTH MODE F/(M)	27 /(49)		18 /(32)	
DURATION (H)	0.52		0.33	
	START	STOP	START	STOP
TIME	13:19	13:50	15:16	15:36
LAT.(DEG,MIN)	52 55.7	52 56.6	53 01.1	53 00.2
LONG.(DEG,MIN)	130 50.6	130 50.7	130 56.4	130 56
LC-5990-X	12324.2	12324.6	12261.5	12269.8
LC-5990-Z	41485.1	41490.5	41500.1	41497.1
DEPTH (F)	27	27	18	18
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		5	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	TRACE		TRACE	
FLATHEAD SOLE	-		-	
HALIBUT	17		4	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	15		14	
SAND SOLE	-		2	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	15		5	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	-		-	
INVERTEBRATES	83		47	
TOTAL CATCH (KG.)	130		77	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	11		12	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 15		APR 15	
DEPTH MODE F/(M)	18 /(32)		20 /(36)	
DURATION (H)	0.50		0.48	
	START	STOP	START	STOP
TIME	18:11	18:41	19:30	19:59
LAT.(DEG,MIN)	53 00.8	53 00.7	53 03.8	0
LONG.(DEG,MIN)	131 07.1	131 05.1	131 06.1	0
LC-5990-X	12221.1	12231.8	12203.7	0
LC-5990-Z	41488.1	41490.1	41498.1	0
DEPTH (F)	17	18	19	20
SPECIES CATCH(KG.)				
BUTTER SOLE	-		2	
CURLFIN SOLE	TRACE		TRACE	
DAB (PACIFIC)	-		40	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		28	
FLATHEAD SOLE	-		-	
HALIBUT	27		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	58		49	
SAND SOLE	11		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	43		4	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	TRACE		TRACE	
DOGFISH	TRACE		-	
RATFISH	-		-	
SKATES	-		-	
INVERTEBRATES	106		59	
TOTAL CATCH (KG.)	245		182	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	13		14	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 16		APR 16	
DEPTH MODE F/(M)	30 /(54)		41 /(74)	
DURATION (H)	0.42		0.45	
	START	STOP	START	STOP
TIME	7:12	7:37	8:24	8:51
LAT.(DEG,MIN)	53 05.5	53 06.5	53 05.6	53 06.1
LONG.(DEG,MIN)	130 57.9	130 58.6	130 53.1	130 54.1
LC-5990-X	12223.2	12216.6	12243.8	12236.3
LC-5990-Z	41515.1	41517.1	51520.1	51521.1
DEPTH (F)	30	30	40	41
SPECIES CATCH(KG.)				
BUTTER SOLE	-		4	
CURLFIN SOLE	5		-	
DAB (PACIFIC)	-		70	
DAB (SPECKLED)	-		-	
DOVER SOLE	TRACE		-	
ENGLISH SOLE	8		294	
FLATHEAD SOLE	-		-	
HALIBUT	-		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	7		3	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	TRACE		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	5		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	40		-	
INVERTEBRATES	30		TRACE	
TOTAL CATCH (KG.)	95		371	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	15		16	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 16		APR 16	
DEPTH MODE F/(M)	24 /(43)		20 /(36)	
DURATION (H)	0.45		0.47	
	START	STOP	START	STOP
TIME	11:09	11:36	12:13	12:41
LAT.(DEG,MIN)	53 14.8	53 16.1	53 15.9	53 16.7
LONG.(DEG,MIN)	131 06.1	131 04.5	131 06.5	131 08.6
LC-5990-X	12131.7	12125.3	12114.3	12102.5
LC-5990-Z	41539.1	41545.1	41542.1	41543.1
DEPTH (F)	22	25	20	20
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		1	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		TRACE	
ENGLISH SOLE	TRACE		TRACE	
FLATHEAD SOLE	-		-	
HALIBUT	30		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	19		34	
SAND SOLE	-		3	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	30		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	80		85	
INVERTEBRATES	15		-	
TOTAL CATCH (KG.)	174		123	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	17		18	
MAJOR AREA	5C		5C	
MINOR AREA	5 LOWER		5 LOWER	
DATE	APR 16		APR 16	
DEPTH MODE F/(M)	45 /(82)		45 /(82)	
DURATION (H)	0.35		0.52	
	START	STOP	START	STOP
TIME	14:53	15:14	15:49	16:20
LAT.(DEG,MIN)	53 20.1	53 21.3	53 20.1	53 21.3
LONG.(DEG,MIN)	131 03.1	131 03.1	130 58.9	130 58.9
LC-5990-X	12108.6	12115.4	12115.3	12106.4
LC-5990-Z	41567.1	41564.1	41567.1	41568.1
DEPTH (F)	44	46	44	45

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	60
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	4
FLATHEAD SOLE	-	-
HALIBUT	-	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	-	6
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	1
PACIFIC COD	-	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	5
DOGFISH	-	-
RATFISH	-	-
SKATES	-	-
INVERTEBRATES	-	60
TOTAL CATCH (KG.)	0	136
REMARKS	DOORS CROSSED	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	19		20	
MAJOR AREA	5D		5D	
MINOR AREA	2A EAST		5 UPPER	
DATE	APR 16		APR 17	
DEPTH MODE F/(M)	18 /(32)		26 /(47)	
DURATION (H)	0.47		0.37	
	START	STOP	START	STOP
TIME	18:10	18:38	6:51	7:13
LAT.(DEG,MIN)	53 30.5	53 31.2	53 34.6	53 33.8
LONG.(DEG,MIN)	131 08.8	131 10.1	131 07.8	131 06.3
LC-5990-X	11999.4	11991.7	11973.8	11982.1
LC-5990-Z	41588.1	41589.1	41603.7	41602.6
DEPTH (F)	20	16	25	26

SPECIES CATCH(KG.)

BUTTER SOLE	1	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	20
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	73
FLATHEAD SOLE	-	-
HALIBUT	-	9
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	26	204
SAND SOLE	4	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	4	39
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	1	-
RATFISH	-	-
SKATES	185	155
INVERTEBRATES	10	-
TOTAL CATCH (KG.)	231	500
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	21		22	
MAJOR AREA	5D		5D	
MINOR AREA	5 UPPER		5 UPPER	
DATE	APR 17		APR 17	
DEPTH MODE F/(M)	23 /(42)		42 /(76)	
DURATION (H)	0.45		0.42	
	START	STOP	START	STOP
TIME	9:45	10:12	11:39	12:04
LAT.(DEG,MIN)	53 32.5	53 32.8	53 35.8	53 36.9
LONG.(DEG,MIN)	131 00.6	131 01.2	130 46.6	130 46.6
LC-5990-X	12015.5	12011.1	12044.6	12039.2
LC-5990-Z	41605.1	41606.1	41635.7	41638.5
DEPTH (F)	22	23	42	41
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		62	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		2	
FLATHEAD SOLE	-		-	
HALIBUT	9		1	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	19		28	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	1		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		TRACE	
LINGCOD	-		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	100		-	
INVERTEBRATES	41		-	
TOTAL CATCH (KG.)	170		93	
REMARKS	HUNG UP		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	23		24	
MAJOR AREA	5D		5D	
MINOR AREA	5 UPPER		2A EAST	
DATE	APR 17		APR 17	
DEPTH MODE F/(M)	30 /(54)		25 /(45)	
DURATION (H)	0.15		0.53	
	START	STOP	START	STOP
TIME	13:38	13:47	15:41	16:13
LAT.(DEG,MIN)	53 38.4	53 38.5	53 41.2	53 42.7
LONG.(DEG,MIN)	131 02.6	131 03.1	131 14.1	131 16.1
LC-5990-X	11961.2	11960.5	11891.9	11880.3
LC-5990-Z	41623.1	41622.7	41617.1	41619.3
DEPTH (F)	32	28	25	24

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	-
FLATHEAD SOLE	-	-
HALIBUT	-	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	3	-
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	-	6818
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	-	-
RATFISH	143	-
SKATES	-	-
INVERTEBRATES	40	-
TOTAL CATCH (KG.)	186	6818
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	25		26	
MAJOR AREA	5D		5D	
MINOR AREA	5 UPPER		5 UPPER	
DATE	APR 17		APR 18	
DEPTH MODE F/(M)	40 /(73)		30 /(54)	
DURATION (H)	0.35		0.40	
	START	STOP	START	STOP
TIME	18:44	19:05	6:58	7:22
LAT.(DEG,MIN)	53 38.1	53 48.3	53 48.1	53 48.6
LONG.(DEG,MIN)	130 55.5	130 56.5	130 59.5	130 59.1
LC-5990-X	11917.6	11913.3	11899.9	11896.3
LC-5990-Z	41662.1	41664.1	41658.3	41660.9
DEPTH (F)	40	40	29	30
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	TRACE		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	TRACE		-	
ENGLISH SOLE	-		-	
FLATHEAD SOLE	-		-	
HALIBUT	12		-	
PETRALE SOLE	-		-	
REX SOLE	40		-	
ROCK SOLE	10		13	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	3		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	1		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		11	
RATFISH	-		-	
SKATES	-		80	
INVERTEBRATES	53		-	
TOTAL CATCH (KG.)	119		104	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	27		28	
MAJOR AREA	5D		5D	
MINOR AREA	5 UPPER		4	
DATE	APR 18		APR 18	
DEPTH MODE F/(M)	25 /(45)		35 /(64)	
DURATION (H)	0.47		0.35	
	START	STOP	START	STOP
TIME	8:45	9:13	12:32	12:53
LAT.(DEG,MIN)	53 49.6	53 48.8	53 56.6	53 57.4
LONG.(DEG,MIN)	131 09.5	131 08.7	131 04.8	131 03.9
LC-5990-X	11850.1	11859.6	11813.2	11805.8
LC-5990-Z	41650.1	41648.6	41680.1	41681.4
DEPTH (F)	25	25	35	34

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	1	TRACE
FLATHEAD SOLE	-	-
HALIBUT	8	30
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	33	50
SAND SOLE	-	28
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	2	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	1	138
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	TRACE	-
MISC. SPECIES	2	-
DOGFISH	TRACE	-
RATFISH	-	-
SKATES	200	60
INVERTEBRATES	19	30
TOTAL CATCH (KG.)	266	336
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	29		30	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 18		APR 18	
DEPTH MODE F/(M)	21 /(38)		16 /(29)	
DURATION (H)	0.42		0.48	
	START	STOP	START	STOP
TIME	14:36	15:01	16:18	16:47
LAT.(DEG,MIN)	53 59.7	54 00.3	54 02.5	54 02.3
LONG.(DEG,MIN)	131 07.4	131 07.8	131 14.2	131 20.8
LC-5990-X	11776.1	11773.4	11711.6	11706.5
LC-5990-Z	41685.5	41688.4	41678.9	41676.1
DEPTH (F)	21	20	16	16
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		-	
FLATHEAD SOLE	-		-	
HALIBUT	12		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	29		4	
SAND SOLE	TRACE		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		20	
S. MALIGER	-		50	
S. MELANOPS	-		300	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		10	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	1		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		5	
DOGFISH	-		5	
RATFISH	-		-	
SKATES	50		-	
INVERTEBRATES	30		200	
TOTAL CATCH (KG.)	122		594	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	31		32	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 18		APR 19	
DEPTH MODE F/(M)	36 /(65)		18 /(32)	
DURATION (H)	0.18		0.50	
	START	STOP	START	STOP
TIME	19:00	19:11	6:33	7:03
LAT.(DEG,MIN)	54 02.1	54 02.2	54 06.5	54 07.8
LONG.(DEG,MIN)	130 58.7	130 58.5	131 08.2	131 08.2
LC-5990-X	11790.1	11791.2	11718.6	11708.5
LC-5990-Z	41705.9	41704.3	41706.6	41709.8
DEPTH (F)	36	35	18	18
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	TRACE		-	
DOVER SOLE	-		-	
ENGLISH SOLE	TRACE		-	
FLATHEAD SOLE	-		-	
HALIBUT	-		8	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	4		28	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	4		10	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	TRACE		10	
PACIFIC COD	1		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	TRACE		5	
DOGFISH	-		-	
RATFISH	31		50	
SKATES	-		300	
INVERTEBRATES	110		570	
TOTAL CATCH (KG.)	150		981	
REMARKS	HUNG UP		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	33		34	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 19		APR 19	
DEPTH MODE F/(M)	53 /(96)		13 /(23)	
DURATION (H)	0.50		0.43	
	START	STOP	START	STOP
TIME	8:14	8:44	10:20	10:46
LAT.(DEG,MIN)	54 07.2	54 06.2	54 11.7	54 12.8
LONG.(DEG,MIN)	131 03.2	131 03.5	131 09.6	131 08.6
LC-5990-X	11731.3	11739.9	11672.2	11665.7
LC-5990-Z	41715.3	41712.6	41719.8	41724.1
DEPTH (F)	52	53	13	12
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	10		-	
ENGLISH SOLE	129		-	
FLATHEAD SOLE	100		-	
HALIBUT	-		-	
PETRALE SOLE	TRACE		-	
REX SOLE	100		-	
ROCK SOLE	-		49	
SAND SOLE	-		10	
STARRY FLOUNDER	-		-	
TURBOT	127		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	20		-	
PACIFIC COD	212		129	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	147		-	
MISC. SPECIES	40		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	-		150	
INVERTEBRATES	15		15	
TOTAL CATCH (KG.)	900		353	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	35		36	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 19		APR 19	
DEPTH MODE F/(M)	15 /(27)		22 /(40)	
DURATION (H)	0.42		0.42	
	START	STOP	START	STOP
TIME	11:49	12:14	13:30	13:55
LAT.(DEG,MIN)	54 14.1	54 14.1	54 16.5	54 15.8
LONG.(DEG,MIN)	131 10.1	131 10.2	131 08.9	131 09.2
LC-5990-X	11651.1	11651.4	11634.3	11637.2
LC-5990-Z	41726.7	41724.3	41735.9	41733.6
DEPTH (F)	14	16	26	18

SPECIES CATCH(KG.)

BUTTER SOLE	13	5
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	-
FLATHEAD SOLE	-	-
HALIBUT	-	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	16	-
SAND SOLE	-	-
STARRY FLOUNDER	-	3
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	31	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	TRACE
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	-	-
RATFISH	-	-
SKATES	100	169
INVERTEBRATES	50	-
TOTAL CATCH (KG.)	210	177
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	37		38	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 19		APR 19	
DEPTH MODE F/(M)	36 /(65)		49 /(89)	
DURATION (H)	0.42		0.43	
	START	STOP	START	STOP
TIME	15:07	15:32	16:12	16:38
LAT.(DEG,MIN)	54 17.2	54 17.3	54 17.8	54 18.5
LONG.(DEG,MIN)	131 17.5	131 19.1	131 17.7	131 16.5
LC-5990-X	11598.6	11594.3	11593.3	11599.9
LC-5990-Z	41726.3	41724.9	41726.7	41729.8
DEPTH (F)	34	38	49	48
SPECIES CATCH(KG.)				
BUTTER SOLE	13		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		-	
FLATHEAD SOLE	-		-	
HALIBUT	5		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	-		-	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	100		-	
INVERTEBRATES	50		-	
TOTAL CATCH (KG.)	168		0	
REMARKS	USABLE		DOORS CROSSED	

APPENDIX TABLE 1. BRIDGE LOG DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	39		40	
MAJOR AREA	5D		5D	
MINOR AREA	4		4	
DATE	APR 22		APR 22	
DEPTH MODE F/(M)	40 /(73)		19 /(34)	
DURATION (H)	0.48		0.50	
	START	STOP	START	STOP
TIME	7:04	7:33	10:21	10:51
LAT.(DEG,MIN)	53 59.7	53 58.7	53 58.5	53 57.8
LONG.(DEG,MIN)	131 04.5	131 04.6	130 41.2	130 41.9
LC-5990-X	11787.4	11794.3	11898.7	11901.4
LC-5990-Z	41689.7	41686.5	41718.3	41714.3
DEPTH (F)	40	40	20	18

SPECIES CATCH(KG.)

BUTTER SOLE	616	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	25	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	246	15
FLATHEAD SOLE	-	-
HALIBUT	-	3
PETRALE SOLE	-	-
REX SOLE	37	-
ROCK SOLE	12	41
SAND SOLE	-	-
STARRY FLOUNDER	-	41
TURBOT	37	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	185	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	37	-
RATFISH	-	-
SKATES	37	3
INVERTEBRATES	-	TRACE
TOTAL CATCH (KG.)	1232	103
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	41		42	
MAJOR AREA	5D		5D	
MINOR AREA	4		5 UPPER	
DATE	APR 22		APR 22	
DEPTH MODE F/(M)	20 /(36)		19 /(34)	
DURATION (H)	0.13		0.53	
	START	STOP	START	STOP
TIME	14:02	14:10	15:24	15:56
LAT.(DEG,MIN)	53 53.1	53 52.7	53 49.4	53 48.3
LONG.(DEG,MIN)	131 12.5	131 12.7	131 17.8	131 18.2
LC-5990-X	11814.1	11812.9	11828.6	11820.7
LC-5990-Z	41655.3	41656.4	41635.9	41639.3
DEPTH (F)	20	20	18	20
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		2	
FLATHEAD SOLE	-		-	
HALIBUT	-		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	10		65	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	TRACE		-	
DOGFISH	2		5	
RATFISH	-		-	
SKATES	-		20	
INVERTEBRATES	20		126	
TOTAL CATCH (KG.)	32		218	
REMARKS	HUNG UP		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	43		44	
MAJOR AREA	5D		5D	
MINOR AREA	2A EAST		5 UPPER	
DATE	APR 22		APR 23	
DEPTH MODE F/(M)	19 /(34)		51 /(93)	
DURATION (H)	0.42		0.42	
	START	STOP	START	STOP
TIME	17:00	17:25	7:00	7:25
LAT.(DEG,MIN)	53 43.3	53 43.9	53 43.3	53 43.7
LONG.(DEG,MIN)	131 16.6	131 16.8	130 59.7	130 58.6
LC-5990-X	11867.9	11873.5	11972.9	11980.8
LC-5990-Z	41623.9	41621.1	41658.9	41658.6
DEPTH (F)	20	17	50	52
SPECIES CATCH(KG.)				
BUTTER SOLE	-		39	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	1		171	
FLATHEAD SOLE	-		-	
HALIBUT	-		10	
PETRALE SOLE	-		-	
REX SOLE	-		10	
ROCK SOLE	11		11	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		23	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	-		-	
INVERTEBRATES	147		-	
TOTAL CATCH (KG.)	159		264	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	45		46	
MAJOR AREA	5D		5D	
MINOR AREA	4		5 UPPER	
DATE	APR 23		APR 23	
DEPTH MODE F/(M)	40 /(73)		25 /(45)	
DURATION (H)	0.37		0.38	
	START	STOP	START	STOP
TIME	10:00	10:22	12:13	12:36
LAT.(DEG,MIN)	53 46.4	53 47.1	53 36.8	53 36.9
LONG.(DEG,MIN)	130 56.1	130 56.9	131 02.4	131 03.5
LC-5990-X	11935.6	11927.9	11976.9	11973.8
LC-5990-Z	41657.6	41658.1	41618.8	41617.3
DEPTH (F)	40	39	28	22

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	TRACE	-
FLATHEAD SOLE	-	-
HALIBUT	14	10
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	26	26
SAND SOLE	TRACE	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	-	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	-	-
DOGFISH	-	-
RATFISH	-	-
SKATES	10	50
INVERTEBRATES	-	36
TOTAL CATCH (KG.)	50	122
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	47		48	
MAJOR AREA	5D		5C	
MINOR AREA	2A EAST		5 LOWER	
DATE	APR 23		APR 23	
DEPTH MODE F/(M)	15 /(27)		52 /(95)	
DURATION (H)	0.42		0.37	
	START	STOP	START	STOP
TIME	14:06	14:31	19:12	19:34
LAT.(DEG,MIN)	53 35.6	53 36.5	53 22.2	53 22.6
LONG.(DEG,MIN)	131 14.2	131 15.9	130 59.1	130 59.7
LC-5990-X	11928.1	11938.5	12092.5	12097.9
LC-5990-Z	41599.6	41597.2	41573.8	41572.2
DEPTH (F)	15	15	53	50
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		77	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		5	
ENGLISH SOLE	-		349	
FLATHEAD SOLE	-		-	
HALIBUT	4		-	
PETRALE SOLE	-		-	
REX SOLE	-		67	
ROCK SOLE	12		-	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		10	
PACIFIC TOMCOD	-		TRACE	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		5	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	24		-	
INVERTEBRATES	19		-	
TOTAL CATCH (KG.)	59		513	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	49		50	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 24		APR 24	
DEPTH MODE F/(M)	19 /(34)		20 /(36)	
DURATION (H)	0.45		0.47	
	START	STOP	START	STOP
TIME	7:14	7:41	9:47	10:15
LAT.(DEG,MIN)	53 12.2	53 13.1	53 02.2	53 02.5
LONG.(DEG,MIN)	131 23.4	131 23.6	131 19.1	131 20.4
LC-5990-X	12080.9	12075.2	12162.9	12166.2
LC-5990-Z	41510.4	41513.8	41478.9	41481.3
DEPTH (F)	18	20	18	22
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		2	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		TRACE	
FLATHEAD SOLE	-		-	
HALIBUT	17		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	12		48	
SAND SOLE	4		28	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	1		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		5	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		1	
DOGFISH	-		-	
RATFISH	-		54	
SKATES	104		-	
INVERTEBRATES	12		17	
TOTAL CATCH (KG.)	150		155	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	51		52	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 24		APR 24	
DEPTH MODE F/(M)	16 /(29)		18 /(32)	
DURATION (H)	0.43		0.43	
	START	STOP	START	STOP
TIME	14:06	14:32	16:09	16:35
LAT.(DEG,MIN)	53 02.5	53 01.5	53 00.9	53 01.6
LONG.(DEG,MIN)	131 24.2	131 22.9	131 07.4	131 07.8
LC-5990-X	12148.7	12159.1	12219.3	12218.9
LC-5990-Z	41476.1	41475.4	41487.7	41490.7
DEPTH (F)	17	15	18	18
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	2		3	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	-		-	
FLATHEAD SOLE	-		-	
HALIBUT	-		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	18		22	
SAND SOLE	-		5	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	2		2	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		-	
DOGFISH	-		-	
RATFISH	2		TRACE	
SKATES	81		10	
INVERTEBRATES	67		40	
TOTAL CATCH (KG.)	172		82	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	53	54
MAJOR AREA	5C	5C
MINOR AREA	2B EAST	2B EAST
DATE	APR 24	APR 25
DEPTH MODE F/(M)	22 /(40)	34 /(62)
DURATION (H)	0.47	0.38

	START	STOP	START	STOP
TIME	17:09	17:37	7:05	7:28
LAT.(DEG,MIN)	53 03.7	53 03.5	52 54.1	52 53.5
LONG.(DEG,MIN)	131 04.8	131 03.7	131 19.5	131 19.7
LC-5990-X	12212.3	12217.9	12224.1	12223.6
LC-5990-Z	41499.2	41501.1	41452.1	41450.1
DEPTH (F)	20	23	34	33

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	TRACE
DAB (PACIFIC)	-	TRACE
DAB (SPECKLED)	-	-
DOVER SOLE	-	TRACE
ENGLISH SOLE	240	18
FLATHEAD SOLE	-	-
HALIBUT	-	TRACE
PETRALE SOLE	-	TRACE
REX SOLE	-	-
ROCK SOLE	10	360
SAND SOLE	10	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	5	9
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	495
MISC. SPECIES	50	TRACE
DOGFISH	-	-
RATFISH	-	18
SKATES	-	TRACE
INVERTEBRATES	-	TRACE
TOTAL CATCH (KG.)	315	900
REMARKS	USABLE	NET TORN

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	55		56	
MAJOR AREA	5C		5D	
MINOR AREA	2B EAST		4	
DATE	APR 25		APR 25	
DEPTH MODE F/(M)	23 /(42)		26 /(47)	
DURATION (H)	0.38		0.40	
	START	STOP	START	STOP
TIME	10:31	10:54	13:48	14:12
LAT.(DEG,MIN)	52 51.2	52 51.7	52 55.7	52 56.6
LONG.(DEG,MIN)	131 14.4	131 13.8	130 50.6	130 50.7
LC-5990-X	12260.5	12259.8	12326.2	12331.7
LC-5990-Z	41447.1	41449.5	41486.4	41488.5
DEPTH (F)	20	25	26	26

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	TRACE	TRACE
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	-	-
ENGLISH SOLE	-	TRACE
FLATHEAD SOLE	-	-
HALIBUT	15	-
PETRALE SOLE	-	-
REX SOLE	-	-
ROCK SOLE	76	22
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	-	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	46	-
PACIFIC TOMCOD	-	-
SANDLANCE	-	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	10	TRACE
DOGFISH	-	-
RATFISH	177	5
SKATES	-	70
INVERTEBRATES	TRACE	-
TOTAL CATCH (KG.)	324	97
REMARKS	USABLE	USABLE

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	57		58	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		2B EAST	
DATE	APR 25		APR 26	
DEPTH MODE F/(M)	25 /(45)		34 /(62)	
DURATION (H)	0.37		0.42	
	START	STOP	START	STOP
TIME	20:53	21:15	6:51	7:16
LAT.(DEG,MIN)	52 55.6	52 56.5	52 57.5	52 57.6
LONG.(DEG,MIN)	130 50.5	130 50.5	130 47.5	130 46.2
LC-5990-X	12322.1	12315.5	12322.4	12327.8
LC-5990-Z	41487.3	41490.7	41497.8	41499.4
DEPTH (F)	26	24	33	34
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	TRACE		TRACE	
DAB (PACIFIC)	-		50	
DAB (SPECKLED)	-		-	
DOVER SOLE	-		-	
ENGLISH SOLE	TRACE		9	
FLATHEAD SOLE	-		-	
HALIBUT	20		5	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	147		51	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	-		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	8		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	5		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	-		6	
DOGFISH	-		-	
RATFISH	TRACE		-	
SKATES	TRACE		-	
INVERTEBRATES	169		-	
TOTAL CATCH (KG.)	349		121	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	59		60	
MAJOR AREA	5C		5C	
MINOR AREA	2B EAST		5 LOWER	
DATE	APR 26		APR 26	
DEPTH MODE F/(M)	44 /(80)		58 /(106)	
DURATION (H)	0.38		0.12	
	START	STOP	START	STOP
TIME	8:21	8:44	9:35	9:42
LAT.(DEG,MIN)	52 58.6	52 58.6	52 58.6	52 58.8
LONG.(DEG,MIN)	130 44.2	130 43.2	130 42.2	130 41.3
LC-5990-X	12328.1	12333.4	12336.9	12338.2
LC-5990-Z	41505.1	41506.1	41508.7	41509.1
DEPTH (F)	46	41	56	59
SPECIES CATCH(KG.)				
BUTTER SOLE	-		-	
CURLFIN SOLE	-		-	
DAB (PACIFIC)	-		-	
DAB (SPECKLED)	10		-	
DOVER SOLE	3		-	
ENGLISH SOLE	13		-	
FLATHEAD SOLE	-		-	
HALIBUT	5		-	
PETRALE SOLE	-		-	
REX SOLE	-		-	
ROCK SOLE	5		-	
SAND SOLE	-		-	
STARRY FLOUNDER	-		-	
TURBOT	3		-	
S. ALUTUS	-		-	
S. FLAVIDUS	-		-	
S. MALIGER	-		-	
S. MELANOPS	-		-	
S. PAUCISPINIS	-		-	
S. PINNIGER	-		-	
S. PRORIGER	-		-	
S. RUBERRIMUS	-		-	
S. WILSONI	-		-	
S. ZACENTRUS	-		-	
HERRING	-		-	
LINGCOD	-		-	
PACIFIC COD	-		-	
PACIFIC TOMCOD	-		-	
SANDLANCE	-		-	
WALLEYE POLLOCK	-		-	
MISC. SPECIES	TRACE		-	
DOGFISH	-		-	
RATFISH	-		-	
SKATES	-		-	
INVERTEBRATES	6		-	
TOTAL CATCH (KG.)	45		0	
REMARKS	USABLE		USABLE	

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	61		62	
MAJOR AREA	5C		5C	
MINOR AREA	5 LOWER		2B EAST	
DATE	APR 26		APR 26	
DEPTH MODE F/(M)	55 /(100)		28 /(51)	
DURATION (H)	0.47		0.05	
	START	STOP	START	STOP
TIME	10:26	10:54	13:41	13:44
LAT.(DEG,MIN)	52 58.7	52 58.5	52 54.6	52 54.7
LONG.(DEG,MIN)	130 41.4	130 40.8	130 45.5	130 45.5
LC-5990-X	12335.3	12341.7	12350.1	12350.2
LC-5990-Z	41508.9	41508.3	41488.1	41488.2
DEPTH (F)	56	53	28	28

SPECIES CATCH(KG.)

BUTTER SOLE	-	-
CURLFIN SOLE	-	-
DAB (PACIFIC)	-	-
DAB (SPECKLED)	-	-
DOVER SOLE	1	-
ENGLISH SOLE	3	-
FLATHEAD SOLE	-	-
HALIBUT	5	-
PETRALE SOLE	-	-
REX SOLE	2	-
ROCK SOLE	3	-
SAND SOLE	-	-
STARRY FLOUNDER	-	-
TURBOT	2	-
S. ALUTUS	-	-
S. FLAVIDUS	-	-
S. MALIGER	-	-
S. MELANOPS	-	-
S. PAUCISPINIS	-	-
S. PINNIGER	-	-
S. PRORIGER	-	-
S. RUBERRIMUS	-	-
S. WILSONI	-	-
S. ZACENTRUS	-	-
HERRING	-	-
LINGCOD	-	-
PACIFIC COD	5	-
PACIFIC TOMCOD	-	-
SANDLANCE	TRACE	-
WALLEYE POLLOCK	-	-
MISC. SPECIES	TRACE	-
DOGFISH	-	-
RATFISH	-	-
SKATES	50	-
INVERTEBRATES	22	-
TOTAL CATCH (KG.)	93	0
REMARKS	USABLE	HUNG UP

APPENDIX TABLE 1. BRIDGE LOG M/V DOUBLE DECKER APRIL 12-29,1983.

HAUL NO.	63
MAJOR AREA	5C
MINOR AREA	5 LOWER
DATE	APR 26
DEPTH MODE F/(M)	17 /(31)
DURATION (H)	0.38

	START	STOP
TIME	15:41	16:04
LAT.(DEG,MIN)	52 57.6	52 56.6
LONG.(DEG,MIN)	130 41.4	130 40.5
LC-5990-X	12249.8	12257.1
LC-5990-Z	41505.5	41502.5
DEPTH (F)	18	16

SPECIES CATCH(KG.)

BUTTER SOLE	-
CURLFIN SOLE	-
DAB (PACIFIC)	-
DAB (SPECKLED)	-
DOVER SOLE	-
ENGLISH SOLE	TRACE
FLATHEAD SOLE	-
HALIBUT	150
PETRALE SOLE	-
REX SOLE	-
ROCK SOLE	240
SAND SOLE	-
STARRY FLOUNDER	-
TURBOT	-
S. ALUTUS	-
S. FLAVIDUS	-
S. MALIGER	-
S. MELANOPS	-
S. PAUCISPINIS	-
S. PINNIGER	-
S. PRORIGER	-
S. RUBERRIMUS	-
S. WILSONI	-
S. ZACENTRUS	-
HERRING	-
LINGCOD	-
PACIFIC COD	-
PACIFIC TOMCOD	-
SANDLANCE	-
WALLEYE POLLOCK	-
MISC. SPECIES	TRACE
DOGFISH	5
RATFISH	-
SKATES	100
INVERTEBRATES	-
TOTAL CATCH (KG.)	495
REMARKS	USABLE

Appendix Table 2. Common and scientific names of species caught on M/V DOUBLE DECKER, Hecate survey April 11-29, 1983.

Common name	Scientific name
FLATFISH	
Butter sole	*Isopsetta isolepis*
Curlfin sole	*Pleuronichthys decurrens*
Dover sole	*Microstomus pacificus*
English sole	*Parophrys vetulus*
Flathead sole	*Hippoglossoides elassodon*
Pacific halibut	*Hippoglossus stenolepis*
Pacific sanddab	*Citharichthys sordidus*
Petrale sole	*Eopsetta jordani*
Rex sole	*Glyptocephalus zachirus*
Rock sole	*Lepidopsetta bilineata*
Sand sole	*Psettichthys melanostictus*
Speckled sanddab	*Citharichthys stigmaeuso*
Starry flounder	*Platichthys stellatus*
Turbot	*Atheresthes stomias*
Yellowfin sole	*Limanda aspera*
ROCKFISH	
Black rockfish	*Sebastes melanops*
Bocaccio	*Sebastes paucispinis*
Canary rockfish	*Sebastes pinniger*
Pygmy rockfish	*Sebastes wilsoni*
Quillback rockfish	*Sebastes maliger*
Redstripe rockfish	*Sebastes proriger*
Rougheye rockfish	*Sebastes aleutianus*
Sharpchin rockfish	*Sebastes zacentrus*
Yelloweye rockfish	*Sebastes ruberrimus*
ROUNDFISH	
Eulachon	*Thaleichthys pacificus*
Kelp greenling	*Hexagrammos decagrammus*
Lingcod	*Ophiodon elongatus*
Pacific cod	*Gadus macrocephalus*
Pacific herring	*Clupea harengus pallasi*
Pacific sandlance	*Ammodytes hexapterus*
Pacific tomcod	*Microgadus proximus*
Red Irish lord	*Hemilepidotus hemilepidotas*
Sailfin sculpin	*Nautichthys oculofasciatus*
Sturgeon poacher	*Agonus acipenserinus*
Shiner perch	*Cymatogaster aggregata*
Walleye pollock	*Theragra chalcogramma*

Appendix Table 2 (cont'd)

Common name	Scientific name
SELACHII	
Big skate	Raja binoculata
Ratfish	Hydrolagus colliei
Spiny dogfish	Squalus acanthias
INVERTEBRATES	
Anemone	Actiniaria
Barnacles	Cirripedia
Brittle stars	Ophiuroidea
Crab red rock	Cancer productus
Decorator crab	Oregonia gracilis
Northern crangon	Crangon alaskensis
Nudibranchs	Nudibranchia
Octopus	Octopoda
Opal squid	Loligo opalescens
Opal squid eggs	
Oregon triton	Fusitriton oregonensis
Prawn	Pandalus platyceros
Rough patch shrimp	Pandalus stenolepis
Sand dollars	Gnathostomata spp.
Scallops	Pectinidae
Sea cucumber	Holothuroidea
Sea pens	Pennatulacea
Sea urchins	Echinoidea
Stony corals	Madreporaria
Sponges	Porifera
Sunstars	Solaster spp.

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	5				7				8				9			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	6	6	-	-	-	-	-	-	-	-
7	-	-	2	2	-	-	7	7	-	-	-	-	-	-	-	-
8	-	-	0	0	-	-	10	10	-	-	-	-	-	-	-	-
9	-	-	0	0	-	-	27	27	-	-	-	-	-	-	-	-
10	-	-	0	0	-	-	5	5	-	-	-	-	-	-	-	-
11	-	-	0	0	-	-	0	0	-	-	-	-	-	-	-	-
12	-	-	2	2	-	-	2	2	-	-	-	-	-	-	-	-
13	-	-	8	8	-	-	1	1	-	-	2	2	-	-	-	-
14	-	-	6	6	-	-	-	0	-	-	1	1	-	-	-	-
15	-	-	10	10	-	-	-	0	-	-	0	0	-	-	1	1
16	-	-	8	8	-	-	-	0	-	-	4	4	-	-	2	2
17	-	-	7	7	-	-	-	0	-	-	2	2	-	-	1	1
18	-	-	9	9	-	-	-	0	-	-	7	7	-	-	1	1
19	-	-	18	18	-	-	-	0	-	-	10	10	-	-	2	2
20	-	-	15	15	-	-	-	0	-	-	7	7	-	-	1	1
21	-	-	10	10	-	-	-	0	-	-	20	20	-	-	1	1
22	5	-	9	14	2	-	3	3	-	-	23	23	-	-	3	3
23	1	2	-	3	3	-	3	3	1	4	3	8	-	-	3	3
24	1	0	-	1	-	1	0	1	2	0	2	2	1	-	4	5
25	1	3	-	4	-	0	3	3	2	1	2	5	1	-	2	3
26	2	2	-	4	-	-	-	0	1	4	1	6	0	2	0	2
27	1	2	-	3	-	-	-	0	1	2	1	4	0	2	0	2
28	0	2	-	2	-	-	-	0	0	3	1	4	0	1	0	1
29	0	2	-	2	-	-	-	0	0	1	0	1	0	2	0	2
30	2	0	-	2	-	-	-	0	1	0	0	1	0	2	0	2
31	0	1	-	1	-	-	-	0	0	0	0	0	0	1	0	1
32	0	0	-	0	-	-	-	0	0	0	0	0	0	1	0	1
33	0	1	-	1	-	-	-	0	0	0	0	0	0	0	0	0
34	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
35	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
36	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
37	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
38	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
39	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
40	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
41	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
42	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
43	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
44	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
45	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
46	0	2	-	2	-	-	-	0	0	0	0	0	0	0	0	0
47	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
48	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
49	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
50	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
51	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
52	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
53	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
54	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
55	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
56	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
57	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
58	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
59	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
60	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
61	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
62	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
63	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
64	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
65	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
66	0	0	-	0	-	-	-	0	0	0	0	0	0	0	0	0
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	12	18	104	134	5	7	63	75	8	18	79	105	13	24	9	46

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	10				11				12				13			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	2	2	-	-	2	2
7	-	-	-	-	-	-	-	-	-	-	15	15	-	-	3	3
8	-	-	-	-	-	-	-	-	-	-	43	43	-	-	8	8
9	-	-	-	-	-	-	1	1	-	-	34	34	-	-	2	2
10	-	-	-	-	-	-	0	0	-	-	9	9	-	-	0	0
11	-	-	-	-	-	-	0	0	-	-	20	20	-	-	0	0
12	-	-	-	-	-	-	1	1	-	-	27	27	-	-	5	5
13	-	-	-	-	-	-	2	2	-	-	24	24	-	-	8	8
14	-	-	-	-	-	-	1	1	-	-	27	27	-	-	10	10
15	-	-	-	-	-	-	0	0	-	-	22	22	-	-	6	6
16	-	-	-	-	-	-	0	0	-	-	11	11	-	-	8	8
17	-	-	-	-	-	-	0	0	-	-	13	13	-	-	7	7
18	-	-	-	-	-	-	0	0	-	-	4	4	-	-	9	9
19	-	-	-	-	-	-	0	0	-	-	0	0	-	-	7	7
20	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-
21	-	-	-	-	-	-	-	0	-	-	1	1	-	-	-	-
22	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
29	1	-	-	1	-	-	-	0	-	-	-	-	-	-	-	-
30	0	-	-	0	-	-	-	0	-	-	-	-	-	-	-	-
31	0	2	-	2	1	-	-	1	-	-	-	-	-	-	-	-
32	0	1	-	1	1	1	-	2	-	-	-	-	-	-	-	-
33	1	1	-	2	2	1	-	3	-	-	-	-	-	-	-	-
34	-	1	-	1	1	1	-	2	-	-	-	-	-	-	-	-
35	-	0	-	0	4	0	-	4	-	-	-	-	-	-	-	-
36	-	0	-	0	0	2	-	2	-	-	-	-	-	-	-	-
37	-	1	-	1	1	3	-	4	-	-	-	-	-	-	-	-
38	-	2	-	2	-	4	-	4	-	-	-	-	-	-	-	-
39	-	1	-	1	-	5	-	5	-	-	-	-	-	-	-	-
40	-	2	-	2	-	6	-	6	-	-	-	-	-	-	-	-
41	-	1	-	1	-	7	-	7	-	-	-	-	-	-	-	-
42	-	0	-	0	-	6	-	6	-	-	-	-	-	-	-	-
43	-	0	-	0	-	3	-	3	-	-	-	-	-	-	-	-
44	-	1	-	1	-	5	-	5	-	-	-	-	-	-	-	-
45	-	0	-	0	-	2	-	2	-	-	-	-	-	-	-	-
46	-	2	-	2	-	3	-	3	-	-	-	-	-	-	-	-
47	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-
48	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-
49	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	2	15	0	17	10	53	6	69	0	0	253	253	0	0	75	75

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	14				15				16				18			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	0	0	-	-	2	2	-	-	-	-	-	-	-	-
13	-	-	0	0	-	-	0	0	-	-	-	-	-	-	1	1
14	-	-	0	0	-	-	0	0	-	-	-	-	-	-	2	2
15	-	-	1	1	-	-	0	0	-	-	-	-	-	-	0	0
16	-	-	0	0	-	-	1	1	-	-	-	-	-	-	0	0
17	-	-	1	1	-	-	1	1	-	-	-	-	-	-	4	4
18	-	-	3	3	-	-	1	1	-	-	-	-	-	-	5	5
19	-	-	4	4	-	-	2	2	-	-	-	-	-	-	0	0
20	-	2	2	4	-	-	3	3	-	-	1	1	-	-	2	2
21	-	2	3	5	-	-	3	3	-	-	0	0	-	-	0	0
22	-	3	3	6	-	-	4	4	-	-	0	0	-	-	3	3
23	1	2	3	6	-	-	1	1	-	-	0	0	-	-	8	8
24	1	3	1	5	-	-	3	3	-	-	0	0	-	-	4	4
25	-	3	3	6	-	-	0	0	-	-	0	0	-	-	1	1
26	-	3	0	3	-	-	1	1	-	-	0	0	-	-	1	1
27	-	1	1	2	2	-	1	3	-	-	0	0	-	-	1	1
28	-	-	3	3	1	-	0	1	-	-	0	0	-	-	0	0
29	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
30	-	-	1	1	1	-	0	1	-	-	0	0	-	-	0	0
31	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
32	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
33	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
34	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
35	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
36	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
37	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
38	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
39	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
40	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
41	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
42	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
43	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
44	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
45	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
46	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
47	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
48	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
49	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
50	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
51	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
52	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
53	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
54	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
55	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
56	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
57	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
58	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
59	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
60	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
61	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
62	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
63	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
64	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
65	-	-	0	0	1	-	0	1	-	-	0	0	-	-	0	0
66	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
67	-	-	0	0	0	-	1	1	-	-	0	0	-	-	0	0
TOTAL	2	15	11	28	8	15	2	25	14	25	1	40	18	13	12	43

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	19				20				21				22			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	5	5	-	-	1	1	-	-	1	1
14	-	-	-	-	-	-	8	8	-	-	1	1	-	-	2	2
15	-	-	-	-	-	-	6	6	-	-	0	0	-	-	4	4
16	-	-	-	-	-	-	2	2	-	-	1	1	-	-	3	3
17	-	-	-	-	-	-	8	8	-	-	1	1	1	-	10	11
18	-	-	1	1	-	-	13	13	-	-	2	2	0	-	14	14
19	-	-	1	1	-	-	10	10	-	-	-	0	0	-	31	31
20	-	-	0	0	3	2	17	22	-	-	-	0	2	2	23	27
21	-	-	0	0	13	5	1	19	-	-	-	0	11	8	-	19
22	-	-	3	3	10	5	-	15	-	-	-	0	23	8	-	31
23	-	-	2	2	12	5	-	17	-	-	-	0	19	13	-	32
24	-	-	-	0	10	6	-	16	-	-	-	0	8	17	-	25
25	-	-	-	0	26	1	-	27	-	-	-	0	5	10	-	15
26	-	-	-	0	22	6	-	28	-	1	-	1	1	11	-	12
27	1	-	-	1	21	4	-	25	-	0	-	0	3	2	-	5
28	0	1	-	1	14	7	-	21	-	0	-	0	-	6	-	6
29	0	0	-	0	16	7	-	23	1	0	-	1	-	0	-	0
30	1	0	-	1	6	8	-	14	0	0	-	0	-	1	-	1
31	-	3	-	3	5	9	-	14	2	1	-	3	-	2	-	2
32	-	3	-	3	2	7	-	9	2	0	-	2	-	1	-	1
33	-	5	-	5	1	4	-	5	3	0	-	3	-	-	-	-
34	-	2	-	2	0	4	-	4	4	0	-	4	-	-	-	-
35	-	1	-	1	1	1	-	2	5	1	-	6	-	-	-	-
36	-	0	-	0	-	2	-	2	4	0	-	5	-	-	-	-
37	-	2	-	2	-	3	-	3	0	1	-	1	-	-	-	-
38	-	4	-	4	-	3	-	3	1	0	-	1	-	-	-	-
39	-	6	-	6	-	2	-	2	1	0	-	1	-	-	-	-
40	-	2	-	2	-	2	-	2	1	0	-	1	-	-	-	-
41	-	2	-	2	-	2	-	2	0	0	-	0	-	-	-	-
42	-	2	-	2	-	-	-	-	0	3	-	3	-	-	-	-
43	-	0	-	0	-	-	-	-	0	0	-	0	-	-	-	-
44	-	1	-	1	-	-	-	-	0	1	-	1	-	-	-	-
45	-	0	-	0	-	-	-	-	0	0	-	0	-	-	-	-
46	-	0	-	0	-	-	-	-	1	0	-	1	-	-	-	-
47	-	0	-	0	-	-	-	-	1	0	-	1	-	-	-	-
48	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
49	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
50	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
51	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
52	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
53	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
54	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	2	35	7	44	162	95	78	335	24	9	6	39	73	81	88	242

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	23				25				26				27			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	1	1	-	-	1	1	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	2	2	-	-	2	2	-	-	1	1
12	-	-	1	1	-	-	3	3	-	-	3	3	-	-	2	2
13	-	-	-	-	-	-	3	3	-	-	2	2	-	-	4	4
14	-	-	1	1	-	-	2	2	-	-	3	3	-	-	1	1
15	-	-	-	-	-	-	6	6	-	-	2	2	-	-	-	-
16	-	-	1	1	-	-	3	3	-	-	3	3	-	-	-	-
17	-	-	-	-	-	-	2	2	-	-	2	2	-	-	-	-
18	-	-	1	1	-	-	6	6	-	-	3	3	-	-	-	-
19	-	-	-	-	-	-	3	3	-	-	2	2	-	-	-	-
20	-	-	1	1	-	-	6	6	-	-	3	3	-	-	-	-
21	-	-	-	-	1	-	2	3	-	-	2	2	-	-	-	-
22	-	-	1	1	8	-	6	14	-	-	3	3	-	-	-	-
23	-	-	-	-	5	-	3	8	-	-	2	2	-	-	-	-
24	-	-	1	1	6	-	5	11	-	-	3	3	-	-	-	-
25	-	-	-	-	5	-	3	8	-	-	2	2	-	-	-	-
26	-	-	1	1	3	-	7	10	-	-	3	3	-	-	-	-
27	-	-	-	-	1	-	5	6	-	-	2	2	-	-	-	-
28	-	-	1	1	-	-	4	4	-	-	3	3	-	-	-	-
29	-	-	-	-	-	-	1	1	-	-	2	2	-	-	-	-
30	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
31	-	-	-	-	-	-	1	1	-	-	2	2	-	-	-	-
32	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
33	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
34	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
36	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
37	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
38	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
39	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
40	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
41	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
42	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
43	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
44	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
45	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
46	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
47	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
48	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
50	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
52	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
54	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
56	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
58	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
60	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
62	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
64	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
66	-	-	1	1	-	-	1	1	-	-	3	3	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
TOTAL	2	3	6	11	34	13	36	83	19	21	25	65	1	41	17	59

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	28				29				30				31			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	1	1	-	-	-	-	-	-	1	1	-	-	-	-
8	-	-	2	2	-	-	1	1	-	-	2	2	-	-	-	-
9	-	-	3	3	-	-	0	0	-	-	0	0	-	-	-	-
10	-	-	0	0	-	-	0	0	-	-	1	1	-	-	-	-
11	-	-	0	0	-	-	1	1	-	-	1	1	-	-	-	-
12	-	-	3	3	-	-	2	2	-	-	0	0	-	-	-	-
13	-	-	6	6	-	-	2	2	-	-	0	0	-	-	-	-
14	-	-	22	22	-	-	1	1	-	-	0	0	-	-	-	-
15	-	-	14	14	-	-	0	0	-	-	0	0	-	-	-	-
16	-	-	11	11	-	-	1	1	-	-	1	1	-	-	-	-
17	-	-	6	6	-	-	1	1	-	-	-	0	1	-	-	1
18	-	-	2	2	-	-	1	1	-	-	-	0	0	-	-	0
19	-	-	6	6	-	-	1	1	-	-	-	0	1	-	-	1
20	-	-	3	3	2	-	-	2	-	-	-	0	0	-	-	0
21	3	-	-	3	1	1	-	2	-	-	-	0	0	-	-	0
22	1	-	-	1	0	0	-	0	-	-	-	0	1	-	-	1
23	6	-	-	6	1	0	-	1	-	-	-	0	2	-	-	2
24	3	-	-	3	2	0	-	2	-	-	-	0	1	-	-	1
25	3	-	-	3	2	0	-	2	-	-	-	0	2	-	-	2
26	5	-	-	5	1	0	-	1	-	-	-	0	0	-	-	0
27	2	1	-	3	0	0	-	0	-	-	-	0	1	-	-	1
28	5	5	-	10	0	1	-	1	-	-	-	0	-	-	-	-
29	6	3	-	9	0	1	-	1	-	-	-	0	-	-	-	-
30	5	2	-	7	3	1	-	4	-	-	-	0	-	-	-	-
31	2	0	-	2	3	7	-	10	-	-	-	0	-	-	-	-
32	1	2	-	3	0	3	-	3	-	-	-	0	-	-	-	-
33	2	5	-	7	3	4	-	7	-	-	-	0	-	-	-	-
34	1	2	-	3	3	1	-	4	-	1	-	1	-	-	-	-
35	0	9	-	9	1	4	-	5	-	1	-	1	-	-	-	-
36	0	3	-	3	1	3	-	4	-	0	-	0	-	-	-	-
37	2	7	-	9	-	5	-	5	-	1	-	1	-	-	-	-
38	2	3	-	5	-	3	-	3	-	1	-	1	-	-	-	-
39	1	5	-	6	-	1	-	1	-	0	-	0	-	-	-	-
40	0	2	-	2	-	1	-	1	-	0	-	0	1	-	-	1
41	1	2	-	3	-	2	-	2	-	0	-	0	-	-	-	-
42	1	1	-	2	-	2	-	2	-	1	-	1	-	-	-	-
43	-	3	-	3	-	0	-	0	-	0	-	0	-	-	-	-
44	-	2	-	2	-	1	-	1	-	0	-	0	-	-	-	-
45	-	1	-	1	-	0	-	0	-	0	-	0	-	-	-	-
46	-	1	-	1	-	0	-	0	-	0	-	0	-	-	-	-
47	-	0	-	0	-	1	-	1	-	0	-	0	-	-	-	-
48	-	1	-	1	-	-	-	-	-	0	-	0	-	-	-	-
49	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
50	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
51	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
52	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
53	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
54	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
55	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
56	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
57	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
58	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
59	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
60	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
61	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
62	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
63	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
64	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
65	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
66	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
67	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
TOTAL	47	60	79	186	23	42	11	76	0	5	6	11	7	7	0	14

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	32				34				35				39			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	1	1	-	-	-	-	-	-	4	4	-	-	-	-
9	-	-	2	2	-	-	-	-	-	-	5	5	-	-	-	-
10	-	-	1	1	-	-	-	-	-	-	4	4	-	-	-	-
11	-	-	1	1	-	-	-	-	-	-	5	5	-	-	-	-
12	-	-	4	4	-	-	-	-	-	-	1	1	-	-	-	-
13	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
31	1	1	-	2	1	-	-	1	-	-	-	-	1	-	-	1
32	-	2	-	2	2	-	-	2	-	-	-	-	1	-	-	1
33	-	3	-	3	1	-	-	1	-	-	-	-	1	-	-	1
34	-	4	-	4	2	-	-	2	-	-	-	-	1	-	-	1
35	-	3	-	3	3	-	-	3	-	-	-	-	1	-	-	1
36	-	4	-	4	2	-	-	2	-	-	-	-	1	-	-	1
37	-	3	-	3	3	-	-	3	-	-	-	-	1	-	-	1
38	-	2	-	2	3	-	-	3	-	-	-	-	1	-	-	1
39	-	2	-	2	5	-	-	5	-	-	-	-	1	-	-	1
40	-	1	-	1	3	-	-	3	-	-	-	-	1	-	-	1
41	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
42	-	-	-	-	2	-	-	2	-	-	-	-	1	-	-	1
43	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
44	-	-	-	-	5	-	-	5	-	-	-	-	1	-	-	1
45	-	-	-	-	6	-	-	6	-	-	-	-	1	-	-	1
46	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
47	-	-	-	-	5	-	-	5	-	-	-	-	1	-	-	1
48	-	-	-	-	6	-	-	6	-	-	-	-	1	-	-	1
49	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
50	-	-	-	-	5	-	-	5	-	-	-	-	1	-	-	1
51	-	-	-	-	3	-	-	3	-	-	-	-	1	-	-	1
52	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
53	-	-	-	-	2	-	-	2	-	-	-	-	1	-	-	1
54	-	-	-	-	4	-	-	4	-	-	-	-	1	-	-	1
55	-	-	-	-	2	-	-	2	-	-	-	-	1	-	-	1
56	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	1
57	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	1
58	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	1
59	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
60	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
61	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
62	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
63	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
64	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
65	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
66	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
67	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
TOTAL	5	30	17	52	7	57	0	64	5	16	19	40	17	37	7	61

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	40				41				42				43			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
8	-	-	-	-	-	-	-	-	-	-	6	6	-	-	0	0
9	-	-	-	-	-	-	-	-	-	-	10	10	-	-	1	1
10	-	-	-	-	-	-	-	-	-	-	5	5	-	-	0	0
11	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-
13	-	-	-	-	-	-	1	1	-	-	2	2	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	5	5	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
20	-	-	-	-	-	-	-	-	1	-	1	2	-	-	-	-
21	-	-	-	-	-	-	-	-	0	-	1	1	-	-	-	-
22	-	-	-	-	-	-	-	-	0	-	-	0	-	-	-	-
23	-	-	-	-	-	-	-	-	0	-	-	0	-	-	-	-
24	-	-	-	-	1	-	-	1	0	-	-	0	-	-	-	-
25	-	-	-	-	0	-	-	0	1	-	-	1	-	-	-	-
26	1	-	-	1	0	-	-	0	1	-	-	1	-	-	-	-
27	6	-	-	6	0	-	-	0	2	-	-	2	-	-	-	-
28	2	5	-	7	-	-	-	-	1	-	-	1	-	-	-	-
29	7	4	-	11	-	-	-	-	3	-	-	3	1	-	-	1
30	6	4	-	10	1	-	-	1	5	-	-	5	0	-	-	0
31	3	3	-	6	1	1	-	2	4	-	-	4	1	-	-	1
32	2	9	-	11	-	1	-	1	3	-	-	3	1	-	-	1
33	0	6	-	6	-	1	-	1	5	-	-	5	0	-	-	0
34	0	3	-	3	-	0	-	0	5	-	-	5	1	-	-	1
35	0	4	-	4	-	1	-	1	3	-	-	3	0	-	-	0
36	0	6	-	6	-	2	-	2	7	-	-	7	1	-	-	1
37	1	5	-	6	-	2	-	2	4	-	-	4	4	-	-	4
38	-	7	-	7	-	-	-	-	4	-	-	4	0	-	-	0
39	-	1	-	1	-	-	-	-	1	-	-	1	2	-	-	2
40	-	-	-	-	-	-	-	-	-	10	-	10	0	-	-	0
41	-	-	-	-	-	-	-	-	-	6	-	6	4	-	-	4
42	-	-	-	-	-	-	-	-	-	8	-	8	-	-	-	-
43	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-
44	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-
45	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-
46	-	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
47	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-
48	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	28	53	0	81	2	5	1	8	22	75	42	139	3	13	2	18

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	44				45				46				47			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	7	7	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-	-
16	-	-	2	2	-	-	2	2	-	-	-	-	-	-	-	-
17	-	-	1	1	-	-	5	5	-	-	-	-	-	-	-	-
18	-	-	2	2	-	1	1	2	-	-	-	-	-	-	-	-
19	-	-	7	7	-	4	3	7	-	-	-	-	-	-	-	-
20	-	-	9	9	-	2	1	3	-	-	-	-	-	-	-	-
21	-	-	-	-	5	3	5	13	-	-	-	-	-	-	-	-
22	2	2	-	4	2	4	5	11	-	-	-	-	-	-	-	-
23	4	4	-	8	7	2	6	15	-	-	-	-	-	-	-	-
24	2	1	-	3	5	3	9	17	-	-	-	-	-	-	-	-
25	3	4	-	7	3	4	10	17	-	-	-	-	-	-	-	-
26	0	1	-	1	2	2	6	10	-	-	-	-	-	-	-	-
27	2	0	-	2	4	4	7	15	-	-	-	-	-	-	-	-
28	-	1	-	1	1	1	5	7	-	-	-	-	-	-	-	-
29	-	1	-	1	0	2	4	6	-	-	-	-	-	-	-	-
30	-	2	-	2	2	1	4	7	-	-	-	-	-	-	-	-
31	-	1	-	1	1	2	1	4	-	-	-	-	-	-	-	-
32	-	2	-	2	1	0	1	2	-	-	-	-	-	-	-	-
33	-	1	-	1	0	1	2	3	-	-	-	-	-	-	-	-
34	-	0	-	0	0	2	3	5	-	-	-	-	-	-	-	-
35	-	1	-	1	0	1	2	3	-	-	-	-	-	-	-	-
36	-	0	-	0	1	0	3	4	-	-	-	-	-	-	-	-
37	-	1	-	1	0	0	2	2	-	-	-	-	-	-	-	-
38	-	0	-	0	0	0	1	1	-	-	-	-	-	-	-	-
39	-	0	-	0	0	0	3	3	-	-	-	-	-	-	-	-
40	-	0	-	0	0	0	1	1	-	-	-	-	-	-	-	-
41	-	0	-	0	0	0	1	1	-	-	-	-	-	-	-	-
42	-	1	-	1	0	0	0	0	-	-	-	-	-	-	-	-
43	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
44	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
45	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
46	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
47	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
48	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
49	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
50	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
51	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
52	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
53	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
54	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
55	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
56	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
57	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
58	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
59	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
60	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
61	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
62	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
63	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
64	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
65	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
66	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
67	-	0	-	0	0	0	0	0	-	-	-	-	-	-	-	-
TOTAL	12	22	21	55	38	34	33	105	13	26	2	41	3	11	3	17

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	49				50				51				52			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	2	2	-	-	-	-	-	-	1	1	-	-	1	1
13	-	-	2	2	-	-	2	2	-	-	1	1	-	-	2	2
14	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	1	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-
23	0	-	-	0	1	-	-	1	-	-	-	-	-	-	-	-
24	0	-	-	0	1	-	-	1	-	-	-	-	-	-	-	-
25	0	-	-	0	0	-	-	0	-	-	-	-	-	-	-	-
26	0	-	-	0	1	-	-	1	-	-	-	-	-	-	-	-
27	1	1	-	2	0	1	-	1	-	-	-	-	-	-	-	-
28	0	0	-	0	1	0	-	1	-	-	-	-	-	-	-	-
29	0	0	-	0	0	2	-	2	-	-	-	-	-	-	-	-
30	0	0	-	0	1	3	-	4	2	1	-	3	-	-	-	-
31	0	1	-	1	3	2	-	5	1	2	-	3	1	1	-	2
32	1	0	-	1	0	4	-	4	2	0	-	2	2	4	-	6
33	0	0	-	0	1	2	-	3	1	2	-	3	1	1	-	2
34	0	1	-	1	1	4	-	5	2	1	-	3	0	1	-	1
35	1	0	-	1	2	3	-	5	0	4	-	4	3	7	-	10
36	1	1	-	2	1	5	-	6	1	2	-	3	0	-	-	0
37	-	1	-	1	1	0	-	1	-	0	-	0	1	1	-	2
38	-	0	-	0	-	2	-	2	-	2	-	2	1	1	-	2
39	-	0	-	0	-	1	-	1	-	4	-	4	0	1	-	1
40	-	1	-	1	-	6	-	6	-	2	-	2	1	1	-	2
41	-	1	-	1	-	6	-	6	-	3	-	3	1	1	-	2
42	-	0	-	0	-	6	-	6	-	1	-	1	1	0	-	1
43	-	0	-	0	-	2	-	2	-	4	-	4	1	1	-	2
44	-	1	-	1	-	3	-	3	-	4	-	4	0	1	-	1
45	-	2	-	2	-	2	-	2	-	3	-	3	1	1	-	2
46	-	0	-	0	-	3	-	3	-	2	-	2	1	0	-	1
47	-	1	-	1	-	1	-	1	-	1	-	1	0	1	-	1
48	-	1	-	1	-	1	-	1	-	0	-	0	0	1	-	1
49	-	-	-	-	-	1	-	1	-	1	-	1	0	0	-	0
50	-	-	-	-	-	-	-	-	-	-	-	-	0	1	-	1
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	5	11	5	21	17	54	4	75	14	39	2	55	14	18	5	37

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	53				54				55				56			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	2	2	-	-	-	-	-	-	1	1	-	-	-	-
11	-	-	0	0	-	-	-	-	-	-	1	1	-	-	-	-
12	-	-	2	2	-	-	-	-	-	-	0	0	-	-	-	-
13	-	-	8	8	-	-	-	-	-	-	1	1	-	-	-	-
14	-	-	21	21	-	-	2	2	-	-	0	0	-	-	1	1
15	-	-	10	10	-	-	2	2	-	-	1	1	-	-	3	3
16	-	-	2	2	-	-	3	3	-	-	8	8	-	-	2	2
17	-	-	3	3	-	-	3	3	-	-	3	3	-	-	1	1
18	-	-	1	1	-	-	7	7	-	-	0	0	-	-	0	0
19	-	-	2	2	-	-	8	8	-	-	0	0	-	-	4	4
20	-	-	2	2	10	5	4	19	-	-	1	1	-	-	-	-
21	-	-	-	-	22	13	-	35	-	-	-	-	-	-	-	-
22	-	-	-	-	53	27	-	80	-	-	-	-	-	-	-	-
23	-	-	-	-	31	22	-	53	-	-	-	-	-	-	-	-
24	-	-	-	-	13	12	-	25	-	-	-	-	-	-	-	-
25	-	-	-	-	9	10	-	19	-	-	-	-	-	-	-	-
26	-	-	-	-	13	9	-	22	-	-	-	-	-	-	-	-
27	-	-	-	-	7	3	-	10	-	-	-	-	-	-	-	-
28	-	-	-	-	5	1	-	6	2	3	-	5	-	-	-	-
29	-	-	-	-	1	0	-	1	1	4	-	5	-	-	-	-
30	-	-	-	-	1	1	-	2	4	6	-	10	-	-	-	-
31	-	-	-	-	0	1	-	1	8	7	-	15	-	-	-	-
32	-	-	-	-	0	1	-	1	7	2	-	9	-	-	-	-
33	-	-	-	-	0	0	-	0	3	-	-	3	-	-	-	-
34	-	-	-	-	1	0	-	1	-	-	-	-	-	-	-	-
35	-	-	-	-	0	1	-	1	1	1	-	2	-	-	-	-
36	-	-	-	-	0	0	-	0	1	1	-	2	-	-	-	-
37	-	-	-	-	0	0	-	0	0	1	-	1	-	-	-	-
38	-	-	-	-	0	0	-	0	0	1	-	1	-	-	-	-
39	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
40	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
41	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
42	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
43	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
44	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
45	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
46	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
47	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
48	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
49	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
50	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
51	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
52	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
53	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
54	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
55	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
56	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
57	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
58	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
59	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
60	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
61	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
62	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
63	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
64	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
65	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
66	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
67	-	-	-	-	0	0	-	0	0	0	-	0	-	-	-	-
TOTAL	5	13	55	73	167	110	29	306	43	73	15	131	6	18	11	35

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	57				58				59				61			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	0	0	-	-	1	1	-	-	-	-	-	-	-	-
9	-	-	0	0	-	-	3	3	-	-	-	-	-	-	-	-
10	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-
11	-	-	6	6	-	-	1	1	-	-	-	-	-	-	-	-
12	-	-	20	20	-	-	8	8	-	-	-	-	-	-	-	-
13	-	-	69	69	-	-	8	8	-	-	-	-	-	-	-	-
14	-	-	102	102	-	-	15	15	-	-	-	-	-	-	-	-
15	-	-	91	91	-	-	8	8	-	-	2	2	-	-	-	-
16	-	-	56	56	-	-	10	10	-	-	0	0	-	-	-	-
17	-	-	45	45	-	-	22	22	-	-	2	2	-	-	-	-
18	-	-	54	54	-	-	57	57	-	-	4	4	-	-	1	1
19	3	1	61	65	-	-	98	98	-	-	4	4	-	-	-	0
20	10	4	43	57	-	-	69	69	-	-	10	10	-	-	-	0
21	19	15	-	34	9	12	-	21	-	-	-	0	-	1	-	1
22	8	13	-	21	9	9	-	18	1	2	-	3	4	0	-	4
23	8	8	-	16	5	7	-	12	0	1	-	1	0	1	-	1
24	6	7	-	13	8	3	-	11	0	1	-	1	0	1	-	0
25	8	9	-	17	4	5	-	9	6	1	-	7	1	1	-	2
26	11	5	-	16	1	5	-	6	1	0	-	1	0	1	-	0
27	13	6	-	19	1	3	-	4	-	0	-	0	1	0	-	1
28	8	3	-	11	-	-	-	-	-	1	-	1	-	0	-	0
29	7	3	-	10	-	-	-	-	-	0	-	0	-	0	-	0
30	1	6	-	7	-	-	-	-	-	0	-	0	-	0	-	0
31	3	1	-	4	-	-	-	-	-	0	-	0	-	0	-	0
32	0	2	-	2	-	-	-	-	-	0	-	0	-	0	-	0
33	0	1	-	1	-	-	-	-	-	0	-	0	-	0	-	0
34	0	1	-	1	-	-	-	-	-	1	-	1	-	0	-	0
35	1	2	-	3	-	-	-	-	-	-	-	-	-	0	-	0
36	1	2	-	3	-	-	-	-	-	-	-	-	-	0	-	0
37	1	2	-	3	-	-	-	-	-	-	-	-	-	0	-	0
38	0	1	-	1	-	-	-	-	-	-	-	-	-	0	-	0
39	1	3	-	4	-	-	-	-	-	-	-	-	-	0	-	0
40	-	3	-	3	-	-	-	-	-	-	-	-	-	0	-	0
41	-	2	-	2	-	-	-	-	-	-	-	-	-	0	-	0
42	-	1	-	1	-	-	-	-	-	-	-	-	-	0	-	0
43	-	2	-	2	-	-	-	-	-	-	-	-	-	1	-	1
44	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
45	-	6	-	6	-	-	-	-	-	-	-	-	-	-	-	-
46	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
47	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
48	-	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-
49	-	3	-	3	-	-	-	-	-	-	-	-	-	-	-	-
50	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
51	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	109	125	549	783	37	44	301	382	8	7	22	37	6	4	1	11

Appendix Table 3. Rock sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO. 63

FORK LENGTH (CM)	M	F	U	T
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-
10	-	-	-	-
11	-	-	1	1
12	-	-	0	0
13	-	-	0	0
14	-	-	0	0
15	-	-	1	1
16	-	-	0	0
17	-	-	2	2
18	-	-	2	2
19	-	-	0	0
20	-	-	1	1
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	-	-	-	-
25	-	1	-	1
26	-	0	-	0
27	-	0	-	0
28	-	0	-	0
29	-	2	-	2
30	1	1	-	2
31	1	1	-	2
32	1	2	-	3
33	2	0	-	2
34	1	4	-	5
35	3	1	-	4
36	4	0	-	4
37	3	3	-	6
38	2	0	-	2
39	0	0	-	0
40	1	9	-	10
41	-	11	-	11
42	-	7	-	7
43	-	6	-	6
44	-	5	-	5
45	-	4	-	4
46	-	1	-	1
47	-	3	-	3
48	-	2	-	2
49	-	1	-	1
50	-	1	-	1
51	-	-	-	-
52	-	-	-	-
53	-	-	-	-
54	-	-	-	-
55	-	-	-	-
56	-	-	-	-
57	-	-	-	-
58	-	-	-	-
59	-	-	-	-
60	-	-	-	-
61	-	-	-	-
62	-	-	-	-
63	-	-	-	-
64	-	-	-	-
65	-	-	-	-
66	-	-	-	-
67	-	-	-	-
TOTAL	19	65	5	89

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	5				6				7				12			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	55
11	-	-	3	3	-	-	1	1	-	-	-	-	-	-	102	102
12	-	-	16	16	-	-	2	2	-	-	-	-	-	-	73	73
13	-	-	14	14	-	-	1	1	-	-	3	3	-	-	24	24
14	-	-	9	9	-	-	0	0	-	-	0	0	-	-	3	3
15	-	-	11	11	-	-	0	0	-	-	2	2	-	-	0	0
16	-	-	10	10	-	-	0	0	-	-	1	1	-	-	0	0
17	-	-	14	14	-	-	2	2	-	-	1	1	-	-	0	0
18	-	-	32	32	-	-	1	1	-	-	-	0	-	-	2	2
19	-	-	27	27	-	-	2	2	-	-	-	0	-	-	0	0
20	-	-	15	15	-	-	2	2	-	-	-	0	-	-	1	1
21	4	2	12	18	-	1	-	1	-	-	-	0	-	-	-	-
22	6	4	4	14	1	0	-	1	1	-	-	1	-	-	-	-
23	2	8	2	12	0	0	-	0	0	-	-	0	-	-	-	-
24	4	7	1	12	0	1	-	1	0	1	-	1	-	-	-	-
25	3	2	1	6	0	0	-	0	0	-	-	0	-	-	-	-
26	1	2	1	4	1	0	-	1	0	-	-	0	-	-	-	-
27	0	1	-	1	0	0	-	0	0	-	-	0	-	-	-	-
28	0	1	-	1	1	1	-	2	1	-	-	1	-	-	-	-
29	0	0	-	0	0	-	-	0	-	-	-	-	-	-	-	-
30	1	0	-	1	0	-	-	0	-	-	-	-	-	-	-	-
31	1	0	-	1	1	-	-	1	-	-	-	-	-	-	-	-
32	0	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
33	0	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
34	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-
35	2	0	-	2	-	-	-	-	-	-	-	-	-	-	-	-
36	1	0	-	1	-	-	-	-	-	-	-	-	-	-	-	-
37	6	0	-	6	-	-	-	-	-	-	-	-	-	-	-	-
38	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
39	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
40	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-
41	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
42	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
43	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
44	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
45	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
46	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-
47	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	32	35	172	239	4	3	11	18	2	1	7	10	0	0	268	268

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	13				14				18				20			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	12	12	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	19	19	-	-	2	2	-	-	-	-	-	-	-	-
11	-	-	66	66	-	-	7	7	-	-	-	-	-	-	-	-
12	-	-	139	139	-	-	15	15	-	-	13	13	-	-	-	-
13	-	-	142	142	-	-	17	17	-	-	54	54	-	-	-	-
14	-	-	86	86	-	-	13	13	-	-	73	73	-	-	-	-
15	-	-	21	21	-	-	6	6	-	-	83	83	-	-	-	-
16	-	-	14	14	-	-	5	5	-	-	54	54	-	-	-	-
17	-	-	7	7	-	-	8	8	-	-	17	17	-	-	-	-
18	-	-	6	6	-	-	8	8	-	-	10	10	-	-	-	-
19	-	-	7	7	-	-	14	14	-	-	7	7	-	-	-	-
20	-	-	3	3	1	-	7	8	-	-	7	7	-	-	-	-
21	-	-	1	1	4	-	9	13	-	-	1	1	-	-	-	-
22	-	-	-	-	8	2	-	10	-	-	1	1	2	-	-	2
23	-	-	-	-	3	1	-	4	-	-	-	-	2	1	-	3
24	-	-	-	-	3	2	-	5	-	-	-	-	1	1	-	2
25	-	-	-	-	1	2	-	3	-	-	-	-	1	0	-	1
26	-	-	-	-	6	7	-	13	-	-	-	-	0	0	-	0
27	-	-	-	-	5	4	-	9	-	-	-	-	0	1	-	1
28	-	-	-	-	1	1	-	2	-	-	-	-	0	0	-	0
29	-	-	-	-	3	1	-	4	-	-	-	-	1	0	-	1
30	-	-	-	-	4	2	-	6	-	-	-	-	0	1	-	1
31	-	-	-	-	10	4	-	14	-	-	-	-	2	0	-	2
32	-	-	-	-	6	3	-	9	-	-	-	-	1	1	-	2
33	-	-	-	-	3	3	-	6	-	-	-	-	1	1	-	2
34	-	-	-	-	7	6	-	13	-	-	-	-	2	0	-	2
35	-	-	-	-	5	4	-	9	-	-	-	-	1	0	-	1
36	-	-	-	-	3	2	-	5	-	-	-	-	3	0	-	3
37	-	-	-	-	3	2	-	5	-	-	-	-	1	1	-	2
38	-	-	-	-	3	4	-	7	-	-	-	-	1	0	-	1
39	-	-	-	-	1	4	-	5	-	-	-	-	2	0	-	2
40	-	-	-	-	3	4	-	7	-	-	-	-	2	1	-	3
41	-	-	-	-	1	4	-	5	-	-	-	-	3	0	-	3
42	-	-	-	-	3	3	-	6	-	-	-	-	2	1	-	3
43	-	-	-	-	-	4	-	4	-	-	-	-	2	1	-	3
44	-	-	-	-	-	4	-	4	-	-	-	-	4	1	-	5
45	-	-	-	-	-	2	-	2	-	-	-	-	2	0	-	2
46	-	-	-	-	-	1	-	1	-	-	-	-	3	1	-	4
47	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	4
48	-	-	-	-	-	-	-	-	-	-	-	-	2	0	-	2
49	-	-	-	-	-	-	-	-	-	-	-	-	2	4	-	6
50	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	5
51	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2
52	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	1
53	-	-	-	-	-	-	-	-	-	-	-	-	0	1	-	1
54	-	-	-	-	-	-	-	-	-	-	-	-	1	0	-	1
55	-	-	-	-	-	-	-	-	-	-	-	-	0	1	-	1
TOTAL	0	0	523	523	85	68	111	264	0	0	320	320	24	45	0	69

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	27				33				39				40			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	8	8	-	-	-	-	-	-	-	-	-	-	1	1
12	-	-	16	16	-	-	-	-	-	-	-	-	-	-	1	1
13	-	-	12	12	-	-	-	-	-	-	4	4	-	-	2	2
14	-	-	5	5	-	-	-	-	-	-	10	10	-	-	3	3
15	-	-	3	3	-	-	-	-	-	-	6	6	-	-	0	0
16	-	-	1	1	-	-	-	-	-	-	1	1	-	-	1	1
17	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	0
18	-	-	-	-	-	-	-	-	-	-	11	11	-	-	-	0
19	-	-	-	-	-	-	-	-	-	-	18	18	-	-	-	0
20	-	-	-	-	-	-	-	-	10	-	4	14	-	-	-	0
21	-	-	-	-	-	-	-	-	13	2	-	15	-	-	-	0
22	-	-	-	-	-	-	-	-	12	8	-	20	-	-	-	0
23	-	-	-	-	-	-	-	-	6	6	-	12	-	-	-	0
24	-	-	-	-	-	-	-	-	8	10	-	18	-	1	-	1
25	-	-	-	-	1	-	-	1	10	5	-	15	-	0	-	0
26	-	-	-	-	0	-	-	0	8	1	-	9	-	0	-	0
27	-	-	-	-	2	1	-	3	5	3	-	8	-	0	-	0
28	-	-	-	-	0	0	-	0	5	3	-	8	-	0	-	0
29	-	-	-	-	1	0	-	1	4	6	-	10	-	0	-	0
30	-	-	-	-	5	0	-	5	7	6	-	13	-	0	-	0
31	-	-	-	-	15	1	-	16	8	7	-	15	-	0	-	0
32	-	-	-	-	8	2	-	10	2	4	-	6	-	0	-	0
33	-	-	-	-	9	10	-	19	3	5	-	8	-	0	-	0
34	-	-	-	-	7	10	-	17	3	4	-	7	-	0	-	0
35	-	-	-	-	15	3	-	18	1	2	-	3	-	1	-	1
36	-	-	-	-	13	6	-	19	0	0	-	0	-	0	-	0
37	-	-	-	-	4	7	-	11	1	2	-	3	-	1	-	1
38	-	-	-	-	0	13	-	13	-	3	-	3	-	0	-	0
39	-	-	-	-	0	5	-	5	-	2	-	2	-	1	-	1
40	-	-	-	-	1	8	-	9	-	2	-	2	-	1	-	1
41	-	-	-	-	-	8	-	8	-	2	-	2	-	0	-	0
42	-	-	-	-	-	5	-	5	-	4	-	4	-	1	-	1
43	-	-	-	-	-	5	-	5	-	3	-	3	-	4	-	4
44	-	-	-	-	-	2	-	2	-	0	-	0	-	2	-	2
45	-	-	-	-	-	0	-	0	-	1	-	1	-	1	-	1
46	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1
47	-	-	-	-	-	0	-	0	-	0	-	0	-	1	-	1
48	-	-	-	-	-	0	-	0	-	0	-	0	-	2	-	2
49	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	0	0	45	45	81	80	0	161	106	93	58	257	0	18	8	26

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	42				43				44				45			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	2	2	-	-	2	2	-	-	2	2	-	-	-	-
11	-	-	22	22	-	-	1	1	-	-	11	11	-	-	-	-
12	-	-	37	37	-	-	6	6	-	-	28	28	-	-	1	1
13	-	-	20	20	-	-	5	5	-	-	63	63	-	-	4	4
14	-	-	2	2	-	-	4	4	-	-	97	97	-	-	3	3
15	-	-	1	1	-	-	1	1	-	-	86	86	-	-	1	1
16	-	-	-	-	-	-	-	-	-	-	72	72	-	-	4	4
17	-	-	-	-	-	-	-	-	-	-	43	43	-	-	2	2
18	-	-	-	-	-	-	-	-	-	-	36	36	-	-	0	0
19	-	-	-	-	-	-	-	-	-	-	37	37	-	-	1	1
20	-	-	-	-	-	-	-	-	-	-	41	41	-	-	-	-
21	-	-	-	-	-	-	-	-	13	3	20	36	-	-	-	-
22	-	-	-	-	-	-	-	-	20	2	-	22	-	-	-	-
23	-	-	-	-	-	-	-	-	5	10	-	15	-	-	-	-
24	-	-	-	-	-	-	-	-	1	4	-	5	1	-	-	1
25	-	-	-	-	-	-	-	-	1	4	-	5	-	-	-	-
26	-	-	-	-	-	-	-	-	1	4	-	5	-	-	-	-
27	-	-	-	-	-	-	-	-	2	6	-	8	-	-	-	-
28	-	-	-	-	-	-	-	-	2	7	-	9	-	-	-	-
29	-	-	-	-	-	-	-	-	2	3	-	5	-	-	-	-
30	-	-	-	-	-	-	-	-	1	5	-	6	-	-	-	-
31	-	-	-	-	-	-	-	-	1	6	-	7	-	-	-	-
32	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
33	-	-	-	-	-	-	-	-	-	3	-	3	-	-	-	-
34	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
35	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
36	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-
37	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
38	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-
39	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
40	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
41	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
42	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
43	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
44	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
45	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
46	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
47	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
48	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
49	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
50	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
51	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
52	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
53	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
54	-	-	-	-	-	-	-	-	-	0	-	0	-	-	-	-
55	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
TOTAL	0	0	84	84	0	0	19	19	58	66	536	660	1	0	16	17

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	48				53				54				57			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	37
11	-	-	1	1	-	-	13	13	-	-	-	-	-	-	59	59
12	-	-	0	0	-	-	17	17	-	-	-	-	-	-	51	51
13	-	-	1	1	-	-	15	15	-	-	5	5	-	-	27	27
14	-	-	4	4	-	-	3	3	-	-	5	5	-	-	12	12
15	-	-	0	0	-	-	1	1	-	-	5	5	-	-	7	7
16	-	-	4	4	-	-	-	0	-	-	1	1	-	-	1	1
17	-	-	2	2	-	-	-	0	-	-	7	7	-	-	6	6
18	-	-	17	17	-	-	-	0	-	-	3	3	-	-	8	8
19	-	-	13	13	-	-	-	0	-	-	2	2	10	2	-	12
20	9	2	3	14	-	-	-	0	-	-	-	0	1	0	-	1
21	16	5	-	21	-	-	-	0	-	-	-	0	0	4	-	4
22	22	10	-	32	-	-	-	0	1	-	-	1	3	2	-	5
23	32	8	-	40	-	-	-	0	1	2	-	3	4	3	-	7
24	37	18	-	55	-	-	-	0	0	4	-	4	0	5	-	5
25	23	23	-	46	-	-	-	0	1	0	-	1	0	2	-	2
26	17	29	-	46	-	-	-	0	0	3	-	3	0	1	-	1
27	18	25	-	43	-	-	-	0	0	3	-	3	0	1	-	1
28	15	18	-	33	-	-	-	0	1	2	-	3	1	1	-	2
29	9	21	-	30	-	-	-	0	0	1	-	1	1	0	-	1
30	8	19	-	27	-	1	-	1	0	2	-	2	1	0	-	1
31	13	10	-	23	1	0	-	1	0	1	-	1	1	1	-	2
32	4	10	-	14	0	0	-	0	0	2	-	2	1	0	-	1
33	2	9	-	11	3	1	-	4	0	1	-	1	-	-	-	-
34	1	5	-	6	2	0	-	2	0	2	-	2	-	-	-	-
35	1	9	-	10	3	6	-	9	0	1	-	1	-	-	-	-
36	0	8	-	8	4	3	-	7	0	1	-	1	-	-	-	-
37	1	7	-	8	4	17	-	21	0	0	-	0	-	-	-	-
38	0	3	-	3	5	9	-	14	0	0	-	0	-	-	-	-
39	0	4	-	4	5	10	-	15	0	3	-	3	-	-	-	-
40	0	4	-	4	1	13	-	14	0	0	-	0	-	-	-	-
41	0	2	-	2	0	7	-	7	0	0	-	0	-	-	-	-
42	0	4	-	4	0	13	-	13	0	0	-	0	-	-	-	-
43	1	1	-	2	0	7	-	7	0	0	-	0	-	-	-	-
44	-	0	-	0	1	3	-	4	0	0	-	0	-	-	-	-
45	-	3	-	3	-	2	-	2	0	1	-	1	-	-	-	-
46	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
47	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
48	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
49	-	-	-	-	-	3	-	3	-	-	-	-	-	-	-	-
50	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	229	257	45	531	29	99	49	177	3	21	28	52	20	21	213	254

Appendix Table 4. English sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	59				61			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T
8	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-
11	-	-	1	1	-	-	1	1
12	-	-	2	2	-	-	3	3
13	-	-	0	0	-	-	5	5
14	-	-	0	0	-	-	6	6
15	-	-	0	0	-	-	3	3
16	-	-	0	0	-	-	2	2
17	-	-	0	0	-	-	3	3
18	-	-	4	4	-	-	3	3
19	-	-	4	4	-	-	4	4
20	-	-	3	3	1	-	-	1
21	2	2	-	4	1	-	-	1
22	3	2	-	5	4	-	-	4
23	1	2	-	3	0	1	-	1
24	5	2	-	7	1	3	-	4
25	6	6	-	12	1	1	-	2
26	6	4	-	10	1	1	-	2
27	7	2	-	9	0	0	-	0
28	2	2	-	4	1	1	-	2
29	4	2	-	6	0	0	-	0
30	1	1	-	2	1	1	-	2
31	1	1	-	2	0	0	-	0
32	1	1	-	2	0	1	-	1
33	-	3	-	3	-	0	-	0
34	-	0	-	0	-	1	-	1
35	-	1	-	1	-	0	-	0
36	-	0	-	0	-	0	-	0
37	-	1	-	1	-	0	-	0
38	-	-	-	-	-	0	-	0
39	-	-	-	-	-	0	-	0
40	-	-	-	-	-	0	-	0
41	-	-	-	-	-	0	-	0
42	-	-	-	-	-	0	-	0
43	-	-	-	-	-	0	-	0
44	-	-	-	-	-	0	-	0
45	-	-	-	-	-	0	-	0
46	-	-	-	-	-	0	-	0
47	-	-	-	-	-	0	-	0
48	-	-	-	-	-	0	-	0
49	-	-	-	-	-	0	-	0
50	-	-	-	-	-	0	-	0
51	-	-	-	-	-	0	-	0
52	-	-	-	-	-	0	-	0
53	-	-	-	-	-	0	-	0
54	-	-	-	-	-	0	-	0
55	-	-	-	-	-	0	-	0
TOTAL	38	29	14	81	10	8	35	53

Appendix Table 5. Pacific cod length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	7				8				11				20			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	1	1	-	-	-	-	-	-	-	-	-	-	2	2
23	-	-	1	1	-	-	-	-	-	-	-	-	1	-	4	5
24	-	-	0	0	-	-	-	-	-	-	-	-	1	1	2	4
25	-	-	3	3	-	-	-	-	-	-	-	-	1	1	4	6
26	-	-	0	0	-	-	-	-	-	-	-	-	2	1	3	6
27	-	-	0	0	1	1	1	3	-	-	-	-	1	1	1	3
28	-	-	0	0	2	1	1	4	-	-	-	-	1	0	1	2
29	-	-	0	0	1	1	2	4	-	-	-	-	1	1	1	3
30	-	-	1	1	1	2	1	4	1	0	0	1	2	0	0	2
31	-	-	1	1	2	1	1	4	0	0	0	0	3	0	0	3
32	-	-	0	0	1	1	1	3	0	0	0	0	0	0	1	1
33	-	-	1	1	1	1	1	3	0	0	0	0	0	0	0	0
34	-	-	0	0	1	1	1	3	0	0	0	0	0	0	0	0
35	-	-	0	0	-	1	1	2	0	0	0	0	0	0	0	0
36	-	-	1	1	-	1	0	1	0	0	0	0	0	0	0	0
37	-	-	-	-	-	-	1	1	0	0	0	0	0	0	0	0
38	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
39	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
40	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
41	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
42	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
43	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
44	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
45	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
46	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
47	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
48	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
49	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
50	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
51	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
52	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
53	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
54	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
55	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
56	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
57	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
58	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
59	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
60	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
61	-	-	-	-	-	-	-	-	1	0	0	1	0	0	0	0
62	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
63	-	-	-	-	-	-	-	-	0	2	0	2	0	0	0	0
64	-	-	-	-	-	-	-	-	1	0	0	1	0	0	0	0
65	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
66	-	-	-	-	-	-	-	-	0	1	0	1	0	0	0	0
67	-	-	-	-	-	-	-	-	0	1	0	1	0	0	0	0
68	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
69	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
70	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
71	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
72	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
73	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
74	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0
75	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
TOTAL	0	0	7	7	7	9	9	25	9	6	0	15	19	9	23	51

Appendix Table 5. Pacific cod length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	28				39				44				55			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
18	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
19	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
20	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
21	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
22	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
23	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
24	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
25	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
26	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
27	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
28	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
29	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
30	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
31	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
32	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
33	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
34	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
35	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
36	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
37	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
38	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
39	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
40	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
41	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
42	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
43	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
44	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
45	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
46	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
47	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
48	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
49	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
50	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
51	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
52	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
53	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
54	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
55	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
56	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
57	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
58	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
59	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
60	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
61	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
62	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
63	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
64	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
65	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
66	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
67	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
68	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
69	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
70	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
71	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
72	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
73	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
74	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
75	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1
TOTAL	0	0	79	79	29	60	8	97	47	49	22	118	43	50	15	108

Appendix Table 6. Butter sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	14				35				36				37			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
14	-	1	-	1	-	-	-	-	-	-	1	1	-	-	1	1
15	-	0	-	0	-	-	-	-	-	-	2	2	-	-	2	2
16	-	0	-	0	-	-	-	-	-	-	0	0	-	-	3	3
17	-	0	-	0	-	-	-	-	-	-	1	1	-	-	1	1
18	-	0	-	0	-	-	-	-	-	-	1	1	-	-	2	2
19	-	0	-	0	-	-	-	-	-	-	0	0	-	-	1	1
20	1	1	-	2	-	-	-	-	-	-	0	0	1	-	3	4
21	0	0	-	0	-	-	-	-	-	-	0	0	1	-	1	2
22	1	3	-	4	-	-	-	-	-	-	0	0	3	-	1	4
23	3	2	-	5	-	-	-	-	-	-	0	0	1	-	1	2
24	2	2	-	4	-	-	-	-	-	1	0	1	1	-	0	1
25	0	4	-	4	-	-	-	-	-	0	0	0	1	-	1	2
26	1	2	-	3	-	-	-	-	-	2	0	2	1	-	1	2
27	-	1	-	1	-	-	-	-	-	0	0	0	1	-	3	4
28	-	0	-	0	-	-	-	-	-	1	0	1	1	-	2	3
29	-	0	-	0	1	-	-	1	-	0	0	0	1	-	4	5
30	-	0	-	0	0	-	-	0	-	0	0	0	1	-	3	4
31	-	0	-	0	0	-	-	0	-	7	0	7	1	-	1	2
32	-	0	-	0	0	2	-	2	-	0	0	0	1	-	3	4
33	-	0	-	0	2	1	-	3	-	3	0	3	1	-	2	3
34	-	0	-	0	0	1	-	1	-	2	0	2	1	-	5	6
35	-	1	-	1	0	4	-	4	-	0	0	0	1	-	1	2
36	-	-	-	-	0	1	-	1	-	1	0	1	1	-	0	1
37	-	-	-	-	0	2	-	2	-	0	0	0	1	-	3	4
38	-	-	-	-	0	1	-	1	-	0	0	0	1	-	2	3
39	-	-	-	-	0	0	-	0	-	0	0	0	2	-	0	2
40	-	-	-	-	1	0	-	1	-	0	0	0	1	-	2	3
41	-	-	-	-	0	0	-	0	-	0	0	0	0	-	0	0
42	-	-	-	-	0	0	-	0	-	0	0	0	0	-	0	0
43	-	-	-	-	0	0	-	0	-	0	0	0	0	-	0	0
44	-	-	-	-	0	0	-	0	-	0	0	0	0	-	0	0
45	-	-	-	-	0	0	-	0	-	0	0	0	0	-	0	0
46	-	-	-	-	0	1	-	1	-	0	0	0	0	-	0	0
47	-	-	-	-	0	1	-	1	-	0	0	0	0	-	0	0
48	-	-	-	-	0	1	-	1	-	0	0	0	0	-	0	0
49	-	-	-	-	-	1	-	1	-	0	0	0	0	-	0	0
TOTAL	7	19	0	26	4	19	0	23	0	17	6	23	18	24	10	52

Appendix Table 6. Butter sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO. 39

FORK LENGTH (CM)	M	F	U	T
6	-	-	1	1
7	-	-	3	3
8	-	-	8	8
9	-	-	16	16
10	12	-	7	19
11	18	4	-	22
12	16	3	-	19
13	22	5	-	27
14	34	16	-	50
15	19	24	-	43
16	22	12	-	34
17	13	18	-	31
18	6	5	-	11
19	5	11	-	16
20	2	8	-	10
21	1	3	-	4
22	-	3	-	3
23	-	4	-	4
24	-	-	-	-
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	-	-	-	-
29	-	-	-	-
30	-	-	-	-
31	-	-	-	-
32	-	-	-	-
33	-	-	-	-
34	-	-	-	-
35	-	-	-	-
36	-	-	-	-
37	-	-	-	-
38	-	-	-	-
39	-	-	-	-
40	-	-	-	-
41	-	-	-	-
42	-	-	-	-
43	-	-	-	-
44	-	-	-	-
45	-	-	-	-
46	-	-	-	-
47	-	-	-	-
48	-	-	-	-
49	-	-	-	-
TOTAL	170	116	35	321

Appendix Table 7. Walleye pollock length frequency (numbers). M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.			54	
FORK LENGTH (CM)	M	F	U	T
24	-	-	4	4
25	-	-	16	16
26	-	-	38	38
27	-	-	56	56
28	-	-	55	55
29	-	-	41	41
30	-	-	16	16
31	-	-	14	14
32	-	-	4	4
33	-	-	12	12
34	-	-	11	11
35	-	-	13	13
36	-	-	6	6
37	-	-	5	5
38	-	-	4	4
39	-	-	1	1
40	-	-	2	2
41	-	-	0	0
42	-	-	1	1
43	-	-	0	0
44	-	-	0	0
45	-	-	0	0
46	-	-	0	0
47	-	-	0	0
48	-	-	0	0
49	-	-	1	1
50	-	-	0	0
51	-	-	0	0
52	-	-	0	0
53	-	-	0	0
54	-	-	1	1
TOTAL	0	0	301	301

Appendix Table 8. Pacific sanddab length frequency (numbers). M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO. 14

FORK LENGTH (CM)	M	F	U	T
13	-	-	3	3
14	-	-	5	5
15	-	-	6	6
16	-	-	8	8
17	-	-	6	6
18	-	-	7	7
19	1	-	20	21
20	4	-	12	16
21	7	5	2	14
22	5	7	-	12
23	16	2	-	18
24	8	4	-	12
25	5	3	-	8
26	8	7	-	15
27	3	4	-	7
28	0	2	-	2
29	3	2	-	5
30	-	3	-	3
31	-	2	-	2
32	-	2	-	2
33	-	1	-	1
TOTAL	60	44	69	173

Appendix Table 9. Sand sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	16				19				28				49			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
11	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	2	2	-	-	-	-	1	-	-	1	-	-	-	-
13	-	-	1	1	-	-	-	-	1	-	-	1	-	-	-	-
14	-	-	2	2	-	-	-	-	1	-	-	1	-	-	-	-
15	-	-	-	0	-	-	-	-	3	-	-	3	-	-	1	1
16	-	-	-	0	-	-	1	1	0	-	1	1	-	-	1	1
17	-	-	-	0	-	-	1	1	0	-	0	0	-	-	4	4
18	-	-	-	0	-	-	1	1	0	-	1	1	-	-	1	1
19	-	-	-	0	-	-	1	1	0	-	0	0	-	-	-	-
20	-	-	-	0	-	-	-	0	0	-	1	1	-	-	-	-
21	-	-	-	0	-	1	-	1	0	-	-	0	2	-	-	2
22	-	-	-	0	-	0	-	0	0	-	-	0	2	-	-	2
23	-	-	-	0	1	0	-	1	0	-	-	0	0	-	-	0
24	1	-	-	1	1	0	-	1	0	-	-	0	0	-	-	0
25	0	-	-	0	0	0	-	0	0	-	-	0	2	-	-	2
26	0	-	-	0	0	0	-	0	0	-	-	0	1	-	-	1
27	0	-	-	0	0	0	-	0	0	-	-	0	0	-	-	0
28	0	-	-	0	0	1	-	1	0	-	-	0	0	-	-	0
29	0	-	-	0	1	0	-	1	0	-	-	0	0	-	-	0
30	0	-	-	0	0	0	-	0	0	-	-	0	0	-	-	0
31	0	-	-	0	0	0	-	0	0	-	-	0	1	-	-	1
32	0	-	-	0	0	0	-	0	0	-	-	0	0	-	-	0
33	1	-	-	1	0	0	-	0	2	-	-	2	1	-	-	1
34	-	-	-	0	0	1	-	1	0	1	-	1	1	-	-	1
35	-	-	-	0	1	2	-	3	1	1	-	2	1	-	-	1
36	-	-	-	0	0	2	-	2	1	0	-	1	1	-	-	1
37	-	-	-	0	2	0	-	2	1	1	-	2	1	-	-	1
38	-	-	-	0	-	-	-	-	0	1	-	1	0	-	-	0
39	-	-	-	0	-	-	-	-	1	0	-	1	0	-	-	0
40	-	1	-	1	-	-	-	-	1	1	-	2	0	-	-	0
41	-	0	-	0	-	-	-	-	-	3	-	3	-	1	-	1
42	-	0	-	0	-	-	-	-	-	1	-	1	-	-	-	-
43	-	0	-	0	-	-	-	-	-	2	-	2	-	-	-	-
44	-	0	-	0	-	-	-	-	-	0	-	0	-	-	-	-
45	-	0	-	0	-	-	-	-	-	2	-	2	-	-	-	-
46	-	1	-	1	-	-	-	-	-	1	-	1	-	-	-	-
47	-	1	-	1	-	-	-	-	-	4	-	4	-	-	-	-
48	-	1	-	1	-	-	-	-	-	2	-	2	-	-	-	-
49	-	0	-	0	-	-	-	-	-	0	-	0	-	-	-	-
50	-	1	-	1	-	-	-	-	-	0	-	0	-	-	-	-
51	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	2	5	6	13	3	7	4	14	12	22	3	37	11	1	8	20

Appendix Table 9. Sand sole length frequencies (numbers) by haul. M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO.	50				52			
FORK LENGTH (CM)	M	F	U	T	M	F	U	T
11	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-
16	-	-	1	1	-	-	-	-
17	-	-	3	3	-	-	-	-
18	-	-	5	5	-	-	1	1
19	-	-	6	6	-	-	1	1
20	-	-	1	1	-	-	-	-
21	3	-	-	3	-	-	-	-
22	3	-	-	3	-	-	-	-
23	2	-	-	2	-	-	-	-
24	1	-	-	1	-	-	-	-
25	0	-	-	0	-	-	-	-
26	1	-	-	1	-	-	-	-
27	3	1	-	4	-	-	-	-
28	0	1	-	1	-	-	-	-
29	1	0	-	1	-	-	-	-
30	0	1	-	1	1	-	-	1
31	0	1	-	1	0	-	-	0
32	1	0	-	1	0	-	-	0
33	1	2	-	3	0	-	-	0
34	3	0	-	3	0	-	-	0
35	3	2	-	5	0	-	-	0
36	1	4	-	5	0	-	-	0
37	1	3	-	4	0	-	-	0
38	3	3	-	6	0	1	-	1
39	3	3	-	6	0	0	-	0
40	3	3	-	6	0	1	-	1
41	3	3	-	6	0	0	-	0
42	3	3	-	6	0	1	-	1
43	0	3	-	3	1	2	-	3
44	1	3	-	4	0	2	-	2
45	-	3	-	3	-	-	-	-
46	-	3	-	3	-	-	-	-
47	-	3	-	3	-	-	-	-
48	-	3	-	3	-	-	-	-
49	-	3	-	3	-	-	-	-
50	-	3	-	3	-	-	-	-
51	-	3	-	3	-	-	-	-
52	-	3	-	3	-	-	-	-
TOTAL	24	30	16	70	2	5	2	9

Appendix Table 10. Dover sole length frequency (numbers). M/V DOUBLE DECKER, Hecate Strait, April 12-29,1983.

TOW NO. 61

FORK LENGTH (CM)	M	F	U	T
15	-	-	2	2
16	-	-	3	3
17	-	-	4	4
18	-	-	1	1
19	-	-	-	0
20	-	-	-	0
21	-	-	-	0
22	-	-	-	0
23	1	-	-	1
24	-	2	-	2
TOTAL	1	2	10	13

Appendix Table 11. Oceanographic stations (XBT) occupied by M/V DOUBLE DECKER, APRIL 12-29, 1983.

Conser. No.	Station No.	Day/Mo.	Time (PST)	Position		Bottom depth (m)	Depth (m)/Temp. °C														
				Lat. N	Long. W																
1	1	13/4	2115	51°07.0'	128°20.0'	178	0	5	10	20	30	60	80	90	100	110	130	150	170	178	
							10.5	10.0	10.2	10.2	10.0	10.0	9.5	9.3	8.3	8.0	7.5	7.0	7.0	6.8	
2	5	14/4	0005	51°24.0'	128°42.5'	220	0	5	10	20	30	40	50	60	80	100	120	150	190	210	220
							9.7	9.5	9.9	10.1	9.7	9.3	9.8	10.0	9.5	9.2	8.8	8.3	7.2	6.4	6.2
3	13	14/4	0650	52°00.0'	129°30.0'	205	0	5	10	20	40	50	80	100	110	130	140	150	170	190	206
							10.4	10.2	10.2	10.5	10.1	9.7	9.5	9.1	9.0	8.7	8.5	8.0	7.5	7.0	7.0
4		16/4	0900	53°06.1'	130°54.1'	85	0	5	10	20	30	50	70	85							
							9.2	9.2	9.1	9.0	8.7	8.7	8.7	8.7							
5		17/4	1930	53°48.3'	130°56.5'	78	0	5	10	20	30	40	50	60	70	78					
							8.7	8.7	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.2					
6	33	19/4	1635	54°24.5'	131°23.0'	280	0	5	10	40	80	100	120	150	170	200	220	240	250	270	280
							8.4	8.4	8.2	7.9	8.0	7.8	7.6	7.4	7.2	7.1	7.0	7.0	6.9	6.7	6.8
7	20	25/4	1730	52°49.0'	130°10.8'	230	0	5	10	30	50	60	80	100	120	140	150	170	180	190	230
							10.7	9.5	9.5	9.3	9.3	9.0	8.8	8.6	8.4	8.2	7.7	7.4	6.8	6.0	6.0